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DIARY FOR THE MONTH

MEDICAL APPOINTMENTS VACANT, ETC.

MEDICAL APPOINTMENTS: IMPORTANT NOTICE

EDITORIAL NOTICES

An Address.¹

By S. A. SMITH, M.B., Ch.M. (Sydney),

Retiring President of the New South Wales Branch of the British Medical Association.

IN retiring from the office of President of the New South Wales Branch of the British Medical Association, I have to thank you for the honour of election to this high position and to ask you to submit to the valedictory address which custom prescribes.

The past year has been one full of incident, but free from conflict. The Council's report is in your hands, but there are a few matters which can bear a note of emphasis.

Another year's experience of the *Workers' Compensation Act* of 1926 has brought its developments. Foremost among these has been the arrangement made by the Council with the associated licensed insurers, which led to the document called Schedule D. Unfortunately much lack of comprehension of what this document represents is present in the minds of many members. Before the introduction of this agreement members of the Association who had attended injured workers, could recover their fees only from their patients or from some other person liable. Such a cumbersome method inevitably produced endless difficulties. As a way out the Council, after conference with representatives of a large number of licensed insurers were able to arrange that payment would be made direct to the medical attendant by the insurers, provided that the charges were in accordance with the agreed schedule. This represents a very substantial concession from the insurers and some equivalent concession from the Council was necessary. These facts have not been universally recognized, nor have all our members understood that this method of settlement is purely optional; the other method, more cumbersome and perhaps less certain, is still open to them, if they so desire.

The experience of the past year of the unfamiliar set of conditions arising out of the *Workers' Compensation Act* has indicated that several emendations of the schedule are necessary.

Another improvement of the conditions under which medical men work in respect of the *Workers' Compensation Act*, is already nearing consummation in the alteration of the Common Form of Agreement. By this alteration members of friendly societies who sustain injury in or arising out of the course of their employment, will be on the same footing, in so far as our members are concerned, as other members of the community.

New Building.

The past year has been a noteworthy one in the internal affairs of the Branch, in that it has seen the first steps towards the provision of a new home.

The resumption of the present building has forced this position upon us, but fortunately it was possible to acquire an inspiring site in Macquarie Street. Believing and hoping that we shall not again be ousted for many decades, the Council, in order to make the utmost use of the site and erect a building worthy of the profession and the city, instituted an architectural competition. The response of members of the architectural profession was such that we believe our object will be achieved and Professor Leslie Wilkinson, of the University of Sydney, our assessor, has made his awards in a report which encourages this belief. It is thought that the members of the Branch may look forward with confidence financially and with pride architecturally to the completion of this great project.

Board of Control of Tuberculosis.

An event of great importance during the past year has been the formation of a board of control of tuberculosis appointed by the Government. The formation of such a body has for many years been urged by this Branch as a step to cope with one of the most pressing public health needs of this community. The composition of this board which is to work in conjunction with the tuberculosis division of the Board of Health, embraces great public charitable bodies, such as the Red Cross Society and the village settlement and the public hospitals and dispensaries and its advice may be taken as authoritative.

The activities of this board are to be directed towards the care of the tuberculous patient and to the larger question of the disease in its national aspects. The board recognizes that there is insufficient hospital accommodation for patients who are so ill as to need treatment in bed, nor are there adequate hospital facilities for observation of patients with doubtful diagnoses. It is true there are sanatoria available for suitable cases, but the splendid efforts of those organizations which have made sanatorium treatment possible, are isolated. They are not part of a larger scheme which should include the after-care of people suffering from the disease.

The public health aspect is also to occupy the attention of the board of control. In this regard it hopes to increase the facilities for the diagnosis of contacts and others at the earliest possible moment, so that in as many of these as possible the disease may be arrested and many sources of infection thereby prevented. It also proposes to undertake the investigation into all cases of malnutrition occurring in school children, whether arising from tuberculosis or from some other cause. As an indication of the magnitude of this task, it may be noted that in this State there are 330,000 school children, 150,000 of whom are in the city of Sydney. Of these from 1% to 10% (according to the district in which they live) are suffering from malnutrition.

¹ Delivered at the annual meeting of the New South Wales Branch of the British Medical Association on March 29, 1928.

We believe that the Government is sincere in this matter and that the board of control looks to it for the financial help which is urgently needed. If such help is forthcoming, a great step will be possible towards relieving a situation which in its personal aspects is often heartrending and in its national aspects has been calling for a long time for energetic action.

Tradition.

While these and similar matters have exercised the minds of the Council, the scientific side of the Branch's life has been well cared for. The sectional organizations have shown varying degrees of activity. The ordinary and the clinical meetings and the provision of British Medical Association Lectures in various country centres, have shown that the scientific activities are regarded as the most important among all the affairs of this Branch of the British Medical Association.

The criticism is often levelled against us that we are caught fast in the bonds of tradition. I think our critics think mostly of the traditions of conduct. This jibe has no sting. We are glad to admit that traditions which carry on from the Hippocratic oath still bind us. Although a survey of the daily press, of its photographs of what a recent correspondent of the journal has called "our young heroes" and its highly coloured and generally erroneous articles on medical men and subjects, may cause us some misgivings, it can be felt that ethical tradition of the best kind still holds us.

But is there not much truth in the criticism that in ways other than those of professional conduct we are bound by tradition or by false authority? We go our way, reading our text books, deferring to authority, but do we pause to ponder sufficiently often as to how far our practice is founded on truth or error, on reason or on superstition? In our hurry, are the lessons of the distant or immediate past sufficiently before our minds and are we pervious enough to ideas which are contrary to our older beliefs? The most superficial survey of the history of medicine tends to create the feeling that the day of dramatic advance has gone and that the traditions and superstitions of today are as nothing to those that bound our forefathers. It surely seems impossible to us that the science of medicine should ever experience another Galen, who rescued it from the bondage of fantastic empiricism by the introduction of a physiology founded on observation and experiment and the concept that no disorder of function could occur without a lesion. Yet Galen, though he enriched it, left medicine in the grip of a tradition founded on philosophical speculation, a tradition whose downfall did not come until ages afterwards, when the study of human anatomy was applied to medical science.

One cannot conceive that medicine will ever again be so revolutionized as it was by Harvey's discovery of the circulation of the blood, but even this profound truth swung the pendulum right over to an attempt to find a purely mechanical explanation for all the functions of the body in health and disease;

and in later days after the harvest had been garnered from the study of morbid anatomy, histology and cellular pathology (the sciences which taught the processes of disease), probably our forefathers felt then, as we are apt to do now, that no great revelation was yet in store for them. Yet Pasteur was not then born and the science of bacteriology (which elucidated causes of disease) had not yet revolutionized thought and broken tradition as decisively as any other discovery in history. We say that further discoveries of a like order are impossible, but are they? Certain it is at least that in our time the traditions are there to be destroyed and the process of destruction is even now going on.

The whole history of medicine contains no more fascinating story and no more signal example than that of James Mackenzie, who died three years ago, but whose work has only commenced to live. What was the state of knowledge of chronic diseases of the heart before Mackenzie lived and worked? The era of minute description of symptoms observed as unrelated facts in the Sydenham manner had passed with the introduction of the stethoscope. This valuable instrument, the sign manual of the profession of medicine since that day, has to answer for the setting up of a tradition in which the heart murmur, the injured valve and the theory of "back pressure" in heart failure stood forth most saliently. The teaching of the schools of that time was that in the condition of heart valves was bound the future life of the patient and that the auscultation of a murmur was its revelation. The heart was held to fail because of "back pressure" and the arrhythmias were obscure and dangerous phenomena, imperfectly understood and vaguely appreciated. Such was the state of knowledge when James Mackenzie started his life's work as a general practitioner in a relatively obscure town in Lancashire, a work destined to overthrow the teaching of the schools, to change the whole face of the knowledge of heart disease and to introduce new concepts into clinical medicine, whose effects are now only at their beginning.

One can appreciate the greatness of this man when one realizes that in his busy general practitioner's life, as he himself has stated, he was "seldom able to give an uninterrupted hour's study" to the subjects of his investigation. It would seem that the outstanding character of his mind, which led him to those researches which gave such an impetus to clinical medicine, was his determination to understand the phenomena which he was daily observing. His patients complained of pain and breathlessness, for example, and authority could supply no explanation that his reason could accept. The simplest symptom became the subject of profound thought and investigation and he became inevitably committed to the study of the mechanism and history of symptoms. The results of this study are one great legacy, possibly the greatest that he bequeathed to medical science. The application of this method, practised with extraordinary patience and quiet pertinacity, led to development of the new cardiology which has gained world-wide accept-

ance. Mackenzie noted that many people with murmurs lived their lives out without hurt or disability, that patients with arrhythmia of certain types were healthy beings by every criterion which common sense prescribed, but that other types of irregularities were of the most dangerous portent. He found that the conditions ascribed then universally to "back pressure" occurred in people in whom no valvular lesion was present and that however attractive the "back pressure" theory was, however much it was hallowed by tradition, it did not contain the true explanation of most instances of heart failure.

This story of the general practitioner of an otherwise obscure provincial town in England is one of the romances of the medicine of today. It is an outstanding example of a man breaking with tradition by the clearness of his vision and the refusal to adopt theories that, as the result of his own observations, his mind could not accept.

Mackenzie's work is not finished. He left to us a fresh mental attitude towards symptoms, their interpretation and their significance. He taught us that the real purpose of the study of chronic heart disease was the understanding of heart failure. He showed the real meaning of murmurs and the true significance of irregularities, but he was the first to recognize that his study of the arrhythmias did not completely answer the real question. What is the capacity of the heart muscle to maintain the circulation? The study of the contractility of heart muscle is as yet incomplete. And we are not at the present time at a period when the previously accepted views on the contraction of all muscles are in process of fundamental change. I believe that the time will soon come when the present textbook views of muscular activity will be regarded as a tradition of the past and a new conception will take its place and when this has come to pass, it will appear that accurate clinical observation and interpretation of signs and symptoms at the bedside have played a most important part.

If one takes up most textbooks of today, for example, one meets the traditional definition of muscle tone which has been accepted since the latter half of last century.

The conception of muscle tone must influence the thoughts of the clinician in a great number of diseases, the symptoms of which depend in some degree on its anomalies or disturbances. One refers not only to diseases of locomotion, but to diseases affecting internal organs. Further knowledge is unquestionably required before widespread application to clinical medicine will be possible, but is not that knowledge already accumulating? Sherrington, the greatest among these pioneers, opened up the vista many years ago and to him primarily is due the conception that muscular tone is not "that slight constant tension which is characteristic of healthy muscle" which tradition asserts, but is a state produced by the activity of a proprioceptive reflex mechanism which comes into operation only at certain times such as, as Royle suggests, in the maintenance of posture and in the

first phenomena of muscular contraction. Among the many later contributions to this field, perhaps the most striking is that of N. D. Royle whose researches published and as yet unpublished have demonstrated the functions of the sympathetic nervous system in relation to all muscular activity. We in Australia naturally take great pride in this development of knowledge and we are able to recognize that the first ideas from which this work sprang were those suggested by acute clinical observation of abnormal conditions present in sick people. Again it is the story of observation of facts and refusal to accept the traditional reasons because of their inability to explain the phenomena to a complete extent. The clear vision of a clinician has supplied the happy inspiration revealing the path to pursue.

At any one period of time we shall always be dominated by tradition since the knowledge of today will become in many an instance what tomorrow will recognize as tradition and even superstition. And what of the future? Which will be the next tradition to go? It is obviously not for one of us to tell. According to his special circumstances and opportunities every man's thoughts run forward in certain directions. The teacher of medicine, for example, looks even now for that new textbook which will describe the true natural history of disease which will be based fundamentally on physiology and physiological pathology. In the field of therapeutics may we not hope that a true system to combat bacterial and parasitic infection will arrive and that the effects of various forms of physical energy (electricity and radiation, for example) at present so imperfectly understood, will become of wider value and application in the treatment of disease. The very beginning of this work has been done, but the greater part still awaits achievement.

And may it not be as McCarrison states that the newer knowledge of nutrition is destined to be "the greatest advance in medical science since the days of Lister. When physicians, medical officers of health and the lay public learn to apply the principles which this newer knowledge has to impart, when they know what malnutrition means, when they look upon it as they now look upon sepsis and learn to avoid the one as much as they now avoid the other, then will this knowledge do for medicine what asepsis has done for surgery"? How much of prophecy these words contain, I do not know, but as Meredith has said: "The future not being born, my friend, we will abstain from baptizing it."

THE DIAGNOSIS AND TREATMENT OF DIABETES MELLITUS AND GLYCOSURIA.

By W. WILSON INGRAM, M.C., M.D.,
Honorary Physician to the Royal North Shore Hospital,
Sydney.

ALTHOUGH the various details in the metabolism of our foodstuffs are still quite unknown or merely

¹ Read at a meeting of the Northern Suburbs Medical Association on March 15, 1928.

guessed at, it is at present recognized that all carbohydrate is absorbed into the general blood stream as glucose. This is transformed into glycogen and stored as such in the liver and muscles. It is again transformed into some form of glucose to be oxidized in the tissues to carbon dioxide and water, with the liberation of energy and heat. Approximately also 50% of the protein and 10% of the absorbed fat are converted to glucose, although recent work points to the fact that all the stored fat is burnt up as glucose.

It is certain that any defect in the oxidation of carbohydrate leads to the appearance in the urine of the products of imperfect oxidation of fats, namely, acetone and diacetic acid. Thus fats are said to burn in the fires of carbohydrate and when the fires burn badly they smoulder and smoke, clogging the body with the poisonous ketone bodies which in the diabetic may lead to coma and death.

The storage and oxidation of glucose are largely regulated by the internal secretion of the pancreas, insulin. All the symptoms of *diabetes mellitus* are caused by lack of insulin and they can be relieved by its judicious administration.

In the normal individual the power of storing glucose is remarkably efficient. The fasting blood sugar is in the neighbourhood of 0.1%. After the administration of fifty grammes of glucose it rises to not more than 0.18% and has returned to normal within two hours, usually much sooner, without glycosuria appearing. The administration of large amounts of glucose, up to 300 grammes, has a similar effect.

Let us now study the various departures from the normal which may occur.

In the first place the individual may have a low threshold for sugar and glucose appears in the urine when the blood sugar is in the neighbourhood of 0.14% or lower. Unless he is starved, ketones do not appear; this signifies that he is able to burn his foodstuffs. The condition is diagnosed by a sugar tolerance test which gives a normal curve or slightly lower than normal with glycosuria. He requires no treatment and some insurance companies will accept him as a "first class life."

Secondly, he may suffer from a storage defect only. He has intermittent glycosuria and no keto-

nuria. After the ingestion of fifty grammes of glucose the blood sugar may rise to 0.2% or over, but returns to normal within two hours. This is sometimes referred to as a lag curve. It is of very little importance and difficult to explain. There is, however, a clinical group, usually of old people, who have a definite storage defect without any defect of oxidation. I shall refer to them in detail later.

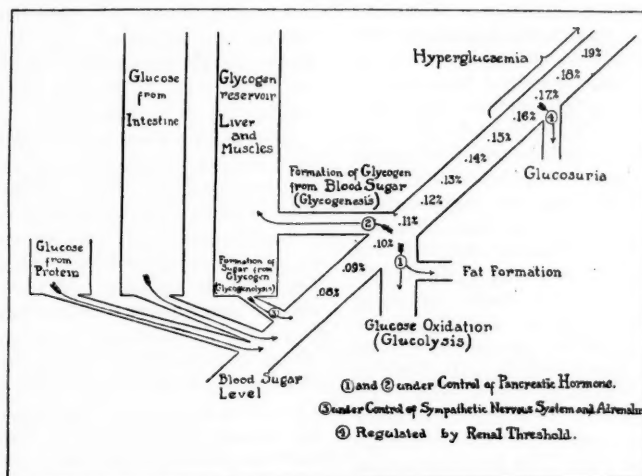
Thirdly, he may have a defect in storage and in oxidation shown by glycosuria as well as ketosis, in other words he is a true diabetic.

Fourthly, he may have a raised renal threshold for sugar, the result of chronic kidney changes, in addition to his storage or oxidation defect. He has no glycosuria, although his blood sugar may be in the neighbourhood of 0.3%. I had two patients with this type of condition lately in whom with a blood sugar of 0.327% and 0.421% a catheter specimen of urine was sugar and acetone free. One

patient had a blood creatinin of 6.8 indicating grave kidney disease and the other had had eclampsia three months previously.

The accompanying table shows the influence of nephritis upon the excretion of sugar in diabetics.

The patients (cases 6 and 7) with high blood sugar content have no sugar in the urine. On the whole the banking up of the sugar in the blood without glycosuria is proportional to the



Schematic Illustration of the Factors which Regulate the Sugar Concentration of the Blood.
(After Ringer and Baumann, in Dubois's "Basal Metabolism.")

severity of the nephritis.

TABLE SHOWING INFLUENCE OF NEPHRITIS UPON THE EXCRETION OF SUGAR IN DIABETES.

Case.	Age.	Sex.	Percentage of Sugar.		Severity of Nephritis.		
			Blood.	Urine.			
1	63	Female	0.19	0	+	+	
2	47	Male	0.22	0	+	+	
3	53	Male	0.24	1.7	+	+	
4	57	Female	0.24	5.0	+	+	
5	27	Female	0.31	6.0	+	+	
6	68	Male	0.35	0	+	+	+
7	50	Female	0.46	0	+	+	+
8	52	Female	1.10	0.5	+	+	

Two Types of Diabetes.

MacLean now recognizes two forms of diabetes. The first is true *diabetes mellitus* in which there is a difficulty in burning sugar as well as a difficulty

in storing it in the liver. Both add to the height of the blood sugar content. Although the tissues are bathed in glucose, they are unable to utilize it. They feel there is a lack of sugar and send chemical hormones to the liver all the time to send more and more sugar; so we get increased mobilization adding to the height of the blood sugar content. There is also a defect in the utilization of fat as shown by ketosis. The true diabetic has, therefore, both glycosuria and ketonuria.

The exciting causes are (i) obesity which predisposes to diabetes, (ii) overfeeding, especially with carbohydrates (iii) infection and (iv) heredity. That overfeeding is a cause is demonstrated by the great increase in the number of diabetics in the United States since the consumption of sugar went up. Infection lowers the sugar tolerance. Any infection will make a diabetic very much worse. The hereditary factor is manifested by the great difference in the pancreas in different individuals. It is a disease of youth or middle age. The first symptoms are the onset of unwonted weariness and lassitude, of thirst after meals, of polyuria, of an increasing hunger and of loss of weight in a person previously over the average weight as most diabetics are. The essential factor is the defect of oxidation leading to ketosis with the possible onset of coma.

At the Royal North Shore Hospital along with Mr. Rudd I investigated the gastric secretion in thirteen patients with diabetes. In nine of them there was no free acid or definite hypoacidity throughout the test. This represents a distinctly higher frequency of hypoacidity than normally occurs. What the significance is we are at present unable to say, but it is probably the result of the deficient nutrition of the body cells in this disease.

The second class of diabetic recognized by MacLean is the glycosuria of old people. The liver has lost the power to store sugar, but the oxidation of fat goes on normally as shown by the absence of ketosis. The condition does not advance much. Nothing is so bad for a weakened pancreas as a high sugar content of the blood. These people are not true diabetics, because even with their high blood sugar they do not become worse, except very occasionally. There is no fear of coma. As a result of the hyperglycemia they may suffer from a group of symptoms which include local irritation, eye changes, weakness, neuritis with vague joint and muscle pains worse at night and gangrene.

It is now established that glycosuria is either renal glycosuria in which the patient both looks and feels well, glycosuria in a patient who is usually over fifty years of age, well nourished and with no symptoms or with symptoms of the type I have mentioned or lastly true diabetes in a young subject who looks and feels ill, unless his condition is very mild. One must, of course, think of the other ductless gland derangements of which the symptoms and signs will be present.

Treatment.

The researches of Allen who established the principle of undernutrition in the treatment of diabetes,

has stimulated an enormous amount of work on the food requirements of the body. Tables showing the calorific requirements of the individual calculated on his height, age and work done are within the reach of all practitioners. Diets based on these can be worked out for particular patients, but for those who have not yet learned to think in terms of calories, the making up of these diets is a laborious and often ineffective procedure. The human body is not a standardized machine and the individual calorific requirements vary within wide limits. Then, as Lawrence points out, the diabetic may get along very well on a diet 20% below that calculated for a healthy individual of the same surface area. Many formulæ have been devised for calculating diets. These have been devised partly on theoretical considerations, but as MacLean says, some individuals appear to be beyond the control of mathematical formulæ. He therefore advocates putting the patient on a fixed diet and giving increasing doses of "Insulin" until satisfactory results are obtained. In MacLean's clinic at St. Thomas's Hospital practically all diabetics receive the same diet, Maclean's "Insulin" No. 1 diet.

The diet is as follows:

Breakfast: Two ounces of bacon and one egg or two eggs or four ounces of fish or meat, one ounce of bread, half an ounce of butter, half an ounce of thick cream, four ounces of vegetables.

Lunch: Beef tea, four ounces of fish or meat, half an ounce of starch-free bread, half an ounce of butter, half an ounce of cheese, one ounce of thin cream, two ounces of vegetables.

Tea: Tea, half an ounce of thin cream, half an ounce of starch-free biscuit, half an ounce of butter.

Dinner: Clear soup, four ounces of meat, four ounces of vegetables, one ounce of white bread, half an ounce of thick cream, half an ounce of cheese, half an ounce of butter.

This diet is found to be sufficient for the great majority of individuals. It is a simple matter to add a milk pudding, extra bread or some fruit to the diet. In practice it is rarely necessary to vary it. Occasionally a patient will wish to substitute one article for another for gastronomic reasons.

Having put the patient on a fixed diet, it is now necessary to find the dose of "Insulin" required to render the patient sugar free. All total diabetics require "Insulin" and it is best given in two doses half an hour before the morning and evening meals. It is wonderful how used patients get to the injections. Like everything else they become a habit which is not nearly so painful or exacting as the morning shave. There is no substitute for "Insulin" at present on the market. It is best to start with five units twice a day and to increase the daily dose by two or three units every second or third day until the sugar content of the blood estimated at the same time each day remains within normal limits or the twenty-four hour specimen of urine is sugar free. If it is found that glycosuria still persists while fifty to sixty units a day are being given, it is better to wait for some weeks before increasing the dose. He

may improve with time or be one of those individuals who are difficult to render sugar free. He will come to no harm with these doses and the practitioner must judge by the general condition of the patient. In these circumstances it is always wise to look for septic foci or other complications. Conversely if any infection supervenes the dose of "Insulin" must be increased. The plan has the merit of simplicity and is certainly most effective.

Elderly glycosurics do not require "Insulin" unless complications are present. Never starve a glycosuric with gangrene to render him sugar free. Put him to bed on a high protein diet (the same diet as that given above without bread will do) and give the necessary doses of "Insulin" until he is sugar free. The symptoms will clear up much more readily by this plan. Thereafter a carbohydrate free diet without "Insulin" is all that is necessary. In many cases much relaxation can be allowed. Children require from fifty to one hundred calories per kilogram of body weight according to age. They require also more protein than adults. Therefore the same diet will suit many children. It will be necessary to cut down some of the quantities in small children and it is wise to give the diet in six rather than four meals.

To MacLean must be given the credit for working out a simple and effective plan for treating diabetes which all practitioners can carry out.

Management of Coma.

When coma supervenes either the patient has been omitting his "Insulin" or a complication has occurred. Three things must be done. The circulation must be improved, the poisonous ketones must be eliminated and "Insulin" must be given to oxidize the fats completely.

The circulation is embarrassed by the weakened heart's action added to the increased viscosity of the blood due to dehydration. Therefore the heart must be stimulated and fluid must be given subcutaneously, intravenously or *per rectum*. The lower bowel must be emptied by means of an enema and the patient must be kept warm by means of hot water bottles. An initial dose of forty units of "Insulin" is given and its effect watched.

It is impossible to treat diabetic coma intelligently without blood sugar estimations. Some patients react quickly to "Insulin" and become hypoglycæmic; this condition in the comatose patient may be unrecognized. If the estimation of the sugar content of the blood can be carried out regularly, the various doses of "Insulin" can be estimated and it may not be necessary to give glucose. If, however, blood sugar estimations are out of the question a catheter should be tied in and the sugar content of the urine should be followed; glucose should be given with subsequent doses of "Insulin" in the proportion of one gramme of glucose for each unit of "Insulin." The "Insulin" should be repeated in thirty to forty unit doses with glucose every four to six hours according to the severity of the condition. If the sugar dis-

appears from the urine more glucose should be given and the urine should be tested regularly for ketones; this is of the greatest help in following the progress of the disease.

There has lately been much discussion on the administration of bicarbonate in acidosis. The practice has been to give sodium bicarbonate as a routine treatment, but now many clinicians doubt if it has any value in the treatment of coma. Intravenous injections are certainly dangerous if the solution has been sterilized in the ordinary way, since heat converts the innocuous bicarbonate into the poisonous carbonate. Goldblatt also has shown that large doses of bicarbonate hinder the action of "Insulin" in reducing the blood sugar. The correct procedure is to give a little bicarbonate by the mouth or *per rectum* to help to replenish the base.

In a paper of this sort I have not attempted to go into scientific detail and much that is important has been left out. My aim has been to try to simplify for you in some measure the diagnosis of diabetes and management of your diabetic patients. As I have said before individual reactions and requirements vary widely and you will assuredly come across conditions that will conform to no known laws. The scheme I have outlined will, I hope, give you a basis on which to work.

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 R. D. Lawrence: "The Diabetic Life."

AN INTRODUCTION TO THE STUDY OF THE ISO-HÆM-AGGLUTINATION REACTIONS OF THE BLOOD OF AUSTRALIAN ABORIGINALS.

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It is generally recognized that in many races of people the individuals comprising the race may be subdivided into four classes on the basis of their blood groups. The method of subdivision has consisted in many cases in classing each fresh individual by the reactions of his corpuscles with the serum of individuals from two known groups.

In February, 1927, I was confronted with the task of classing certain aborigines comprising both full-bloods and castes and on consulting the literature available on this subject, I learnt that it had been the custom to determine the blood groups

of both full-blood and caste aborigines according to the reaction of their corpuscles with known sera (Group II and Group III) obtained from white people. I proceeded on these lines and found that all my subjects could be distributed among the four blood groups described by Moss and Jansky. As the grouping depended on the mixture of the corpuscles of each individual with the two known sera and as only a positive or "negative" result could be produced in each case, it became clear that only four possible permutations of the results of each test could occur and I recognized that each individual was being forced into one of the four groups, despite the fact that his corpuscles might contain some agglutinizable substance which did not react with the agglutinins contained in the two known sera.

In an endeavour to discover whether Australian aborigines represented more than four blood groups, I took as my subjects twelve aborigines who were resident on the Aboriginal Station of Runnymede at South Kyogle, New South Wales. Ten of these were full-bloods, two were seven-eighth full-bloods. They were first classed by testing the reaction of their corpuscles against known Group II and Group III sera obtained from white people. I next separated the corpuscles and serum of each of the twelve specimens of blood and tested every serum against every corpuscular suspension and found that the agglutinations which took place, could not be reconciled with the group distribution produced by classification employing known serum obtained from white people. In other words the blood of some of my subjects contained certain agglutinins and agglutinizable substances which could not be demonstrated by testing the reaction of their corpuscles with known serum from white people. The results of this investigation may perhaps be best understood by reference to the following tables.

Table I shows the results produced by classifying each aboriginal using known serum. The method consists in mixing a drop of a suspension of the subject's corpuscles with a drop of Group II serum and another drop with a drop of Group III serum. According to Moss's classification, in Group I the corpuscles contain the agglutinizable substances A and B, the serum containing no agglutinin; in Group II the corpuscles contain the substance A, the serum containing the agglutinin b; in Group III the corpuscles contain the substance B, the serum containing the agglutinin a; while in Group IV the corpuscles contain no agglutinizable substance, while the serum contains both agglutinins a and b. Consequently if no agglutination occurs in either of the known sera the individual belongs to Group IV; if in both sera the individual belongs to Group I; if in the Group II serum he is a Group III and *vice versa*; only four possible results may occur.

In Table I the subjects numbered one to twenty-one were resident on the Aborigine Station at Wallaga Lake, while the subjects twenty-two to

TABLE I.—SHOWING THE RESULTS OF THE CLASSIFICATION OF THIRTY-THREE ABORIGINES.

No.	Name.	V—Group II Serum.	V—Group III Serum.	Classification Group.
1	Bob Parsons ...	—	—	IV
2	Ted Thomas ...	—	—	IV
3	Arthur Thomas ...	—	+	IV
4	Roy Thomas ...	+	—	III
5	Cecil Thomas ...	+	—	III
6	Sam Haddigaddi ...	—	+	IV
7	Mrs. Pickwick ...	—	—	IV
8	Bill Munday ...	—	—	IV
9	Christy Mumbia ...	—	—	IV
10	Ruby Penrith ...	—	—	IV
11	Gladys Penrith ...	—	+	IV
12	Lorna Carter ...	—	—	IV
13	Joyce Carter ...	—	—	IV
14	Ronnie Thomas ...	+	—	III
15	Tommy Cooney ...	—	—	IV
16	William Thomas ...	—	—	IV
17	Denis Parsons ...	—	—	IV
18	Mrs. Thomas ...	+	+	I
19	Mrs. Stewart ...	—	—	III
20	Annie Stewart ...	—	—	IV
21	Albert Thomas ...	—	—	IV
22	Henry Brown ...	—	—	IV
23	Roger Boyd ...	—	+	IV
24	Harry Monsell ...	—	+	IV
25	Ada Brown ...	—	—	IV
26	Ida Joseph ...	—	—	IV
27	Nellie Walker ...	—	+	IV
28	Sarah Logan ...	—	+	IV
29	Jane Boyd ...	—	—	IV
30	Billy Brown ...	—	+	IV
31	George Roberts ...	—	+	IV
32	Jimmy Mooney ...	—	+	IV
33	Archie Wheatley ...	—	—	IV

— indicates no agglutination.

+ indicates agglutination.

thirty-three resided on the Aboriginal Station at South Kyogle. The latter were all full-bloods with the exception of numbers twenty-six and thirty-one, who were seven-eighths pure black. The blood of these last twelve aborigines was separated into corpuscular suspensions and serum and each suspension was tested against each serum, producing the results set out in Table II.

TABLE II.

Corpuscles of Subjects.	Sera.											
	1	2	3	4	5	6	7	8	9	10	11	12
1	—	—	—	—	—	—	—	—	—	—	—	—
2	+	—	—	+	+	—	—	+	—	—	—	+
3	+	—	—	+	+	—	—	+	—	—	—	+
4	—	—	—	—	—	—	—	+	—	—	—	—
{ caste.	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—
6	+	—	—	+	+	—	—	+	—	—	—	+
7	+	—	—	+	+	—	—	+	—	—	—	+
8	—	—	—	—	—	—	—	—	—	—	—	—
9	+	—	—	+	+	—	—	+	—	—	—	+
{ caste.	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—
11	+	—	—	+	+	—	—	+	—	—	—	+
12	—	—	—	—	—	—	—	+	—	—	—	—

— indicates no agglutination.

+ indicates agglutination.

It can be at once seen from both the tables that, although most of the specimens of blood behave as typical Group II and Group IV, nevertheless the blood of subjects Number 25, 29 and 33 presented atypical features. These three specimens of blood have all been shown by means of agglutination with known serum to belong to the one group (Group IV). And yet the serum of the blood of Number

29 agglutinates the corpuscles of the blood of both Number 25 and Number 33. The corpuscles of the latter two specimens of blood have already been shown to contain neither of the agglutinizable substances A nor B, so that some unclassified agglutinizable substance must be stated to occur in the corpuscles of blood 25 and blood 33 and a specific agglutinin in the serum of blood 29. It is noteworthy that the seven-eighths castes (subjects 26 and 31), both of whose blood has been shown to belong to Group IV, presented typical reactions throughout.

This work was carried on at the expense of the Australian National Research Council at Runnymede Aboriginal Station at South Kyogle, New South Wales. As no records of genealogy were kept on the Station, I investigated the purity of my subjects in three ways: (i) By information supplied by the manager of the Station, (ii) by careful cross examination of each subject, (iii) by cross examination of other aborigines who had known the parents of each subject.

Twelve subjects having been procured, their medical histories were taken and records were made of the name, sex, social condition, age, birth place, genealogy; and photographs were taken in the case of every subject.¹ Five cubic centimetres of blood were withdrawn from the median cubital vein of each by the usual method of veni-puncture.

Preparation of Serum and Corpuscular Suspensions.

The Serum.

The sample of blood collected was placed in a sterile centrifuge tube and plugged with sterile cotton wool. It was then allowed to clot over night. The clot was removed with a fine sterile glass hook and the serum centrifuged for five minutes. It was then withdrawn with a sterile glass pipette fitted with a rubber teat and introduced into a short sterile test tube fitted with a vaccine cap.

The Corpuscular Suspensions.

Two drops of blood were introduced into a sterile test tube containing two cubic centimetres of Brinkmann's solution, thus forming approximately a 2.5% suspension of corpuscles. This was thoroughly mixed and was prevented from clotting by the great dilution in the isotonic fluid. Under the microscope one drop of such a suspension appeared as a homogeneous field of corpuscles without rouleaux or clumping. Brinkmann's solution was used in preference to an isotonic solution of sodium citrate in saline solution, because it produces no osmotic, hydrogen ion or electrical changes in the corpuscle nor does incipient coagulation tend to occur in it.

Cross Agglutination.

1. Every aboriginal serum and corpuscular suspension was tested against Group II and Group III bloods obtained from white Australians.

2. Every aboriginal serum was tested against every aboriginal corpuscular suspension.

Method.

Two drops of serum were placed on a sterile glass slide by means of sterile glass pipette. Two drops of corpuscular suspension were placed with the serum and the two were mixed with a sterile glass rod. The slide was then rocked to and fro for two minutes and at three minute intervals was rocked for two minutes again.

Definite positive agglutinations were recorded as soon as they appeared. The result of no test was recorded as "negative" until failure of agglutination had been established by observation under the microscope fifteen minutes after mixing the serum and corpuscular suspension. No doubtful result was seen.

Records of Subjects.

Subject I.

Henry Brown (Dumbul), aged forty to forty-five years, a male, married and a full-blooded aboriginal, was born at Kyogle, New South Wales. His genealogy is as follows:

Billy Brown—? (full-blood)
 ↓
 Billy Brown—Mary Michulty (full-blood)
 (dead)
 ↓
 Henry Brown

Subject II.

Roger Boyd (Booragi), aged thirty to thirty-three years, a male, legally married, and a full-blooded aboriginal, was born at Wyangarie, New South Wales. His genealogy is as follows:

Tommy Boyd (full-blood)—Sarah ? (full-blood)
 ↓
 Roger Boyd—Jane Logan
 (Subject VIII)
 (full-blood)
 ↓
 Four children

Subject III.

Harry Monsell, aged thirty-nine years, a male, legally married and a full-blooded aboriginal, was born at Bowen, Queensland. His genealogy is as follows:

Harry Monsell—Minnie ?
 ↓
 Harry Monsell—Florrie Edwards (half-caste)
 ↓
 Six children

Subject IV.

Ada Brown, née Young, aged forty-three years, a female, legally married, and a full-blooded aboriginal, was born at Tabulam, New South Wales. Her genealogy is as follows:

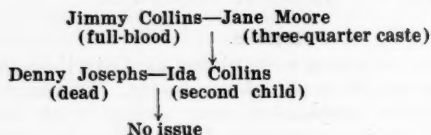
Paddy Young—Ada ?
 (full-blood) (full-blood)
 ↓
 Billy Brown—Ada Young (fourth and youngest child)
 (Subject IX)
 (full-blood)
 ↓
 Eleven children

Subject V.

Ida Josephs, native name Gaganum, née Collins, aged fifty to fifty-five years, a female, legally married, and a

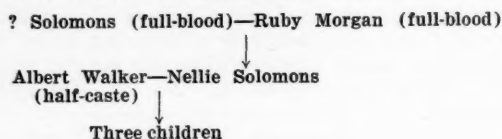
¹ The photographs of the twelve subjects have not been reproduced in this article owing to lack of space.—EDITOR.

caste seven-eighths full-blooded aboriginal, was born at Harrisville, Queensland. Her genealogy is as follows:



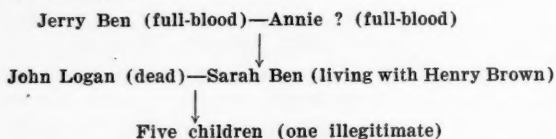
Subject VI.

Nellie Walker, *née* Solomons, aged thirty-two years, a female, legally married and a full-blooded aboriginal, was born at Roseberry Station, New South Wales. Her native name was Babundē. Her genealogy is as follows:



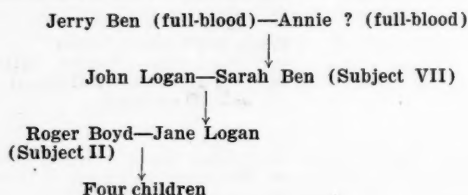
Subject VII.

Sarah Logan, *née* Ben, aged sixty years, a female, a widow and a full-blooded aboriginal, was born at Ipswich, Queensland. Her native name was Ganin. Her genealogy is as follows:



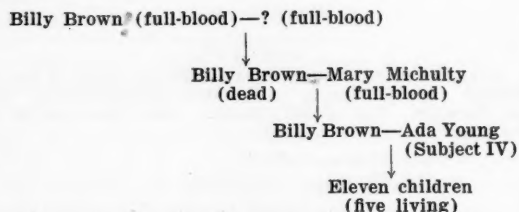
Subject VIII.

Jane Boyd, *née* Logan, aged thirty-three years, a female, legally married and a full-blooded aboriginal, was born at Boonah, Queensland. Her genealogy is as follows:



Subject IX.

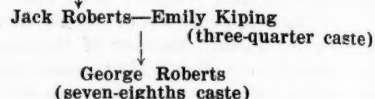
Billy Brown (*Nēān*), aged forty-five to fifty years, a male, legally married and a full-blooded aboriginal, was born at Kyogle, New South Wales. His genealogy is as follows:



Subject X.

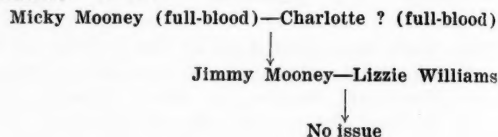
George Roberts (Bweang or Yerwilloom), aged fifty years, a male, single, caste seven-eighths full-blooded, was born at Wyrallah, New South Wales. His genealogy is as follows:

Bob Roberts (full-blood)—? (full-blood)



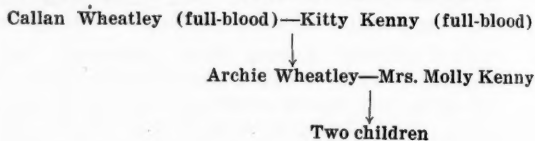
Subject XI.

Jimmy Mooney (Kingian), aged sixty to sixty-five years, a male, legally married and a full-blooded aboriginal, was born at Broadwater, New South Wales. His genealogy is as follows:



Subject XII.

Archie Wheatley, aged forty to forty-five years, a male, legally married and a full-blooded aboriginal, was born at Warwick, Queensland. His genealogy is as follows:



Discussion.

In investigating the blood groups of a pure race it is important:

1. To include only pure members of the race.
2. To record in the case of every individual his genealogy, sex, age, occupation and place of domicile.
3. (a) To cross-agglutinate the serum and corpuscles of every individual, (b) to cross-agglutinate the blood of every individual with known Group II and Group III blood obtained from white people.
4. To employ a technique and method of cross-agglutination the results of which would be as far as possible beyond question.

1. At the outset one is confronted by the difficulties of obtaining any considerable number of full-blooded aborigines in any one place in New South Wales. On no aboriginal station in New South Wales are more than twenty full-blooded aborigines in residence at any one time, with perhaps the exception of Angledool. This was too inaccessible and time did not permit me to work there. The full-blooded population of each station fluctuates from time to time and many full-blooded aborigines do not reside on stations at all. At Runnymede there were fifteen full-blooded aborigines. Some refused to allow blood samples to be taken and others were absent; in consequence only ten samples were obtained.

Anthropologists strongly suspect that the pure Australian aboriginal is a member of an old and primitive race and in view of the fact that the lower vertebrates possess either no iso-hæm-agglutinin or

fewer agglutinin-agglutinin systems than in man and that it is generally suspected that, in the ontogeny of white races at least, the agglutinogens develop before the agglutinins, there are four possibilities for the occurrence of agglutinin-agglutinin systems in a primitive race: (i) None, (ii) agglutinogens only, (iii) one or more systems peculiar to that race alone, (iv) the occurrence of the identical systems now recognized in white races.

The importance of excluding the castes is evident if any of the first three possibilities prove to be true, since a caste would represent a hybrid race, the agglutination reactions of which could not be compared with those of the pure race.

2. Any original research into the subject of iso-haem-agglutination to be of value should be capable of confirmation. A series of results with no reference to persons examined precludes the possibility of future research on these same subjects and hence the value of the results is strictly limited. Schiff states in reference to this subject: "In future data all lists must include the name of the worker, technic used, names of persons tested, sex, birth place, religion and race."

It is necessary, if the blood group statistics of pure-bred Australian aborigines are to be investigated by cross-agglutination tests, that certain observers may be able to identify and cross-agglutinate the bloods from a series of individuals produced by another worker, with the bloods of individuals which they themselves have investigated.

3. Tebbutt, McConell, Lee and Cleland all used Group II and Group III sera of white Australians to classify both pure and caste aborigines. Tebbutt and McConell in their publication state: "Iso-haem-agglutinins . . . agglutinate the red blood corpuscles of one race or series of individuals and not other races within the same species." Hence, unless they were aware beforehand that the agglutinin-agglutinin systems in white Australians and aborigines were identical, they admit according to their own definition an attempt to classify the agglutinin-agglutinin systems of the one race by employing the iso-haem-agglutinins of the other or more simply that they were risking possible confusion by producing hetero-agglutination and not iso-haem-agglutination. The presence of the identical agglutinin-agglutinin systems in aborigines and white Australians must first be proved with an identical distribution between corpuscles and serum before the grouping of aboriginal blood by the use of known white serum can be recognized as justified.

4. Technique.—The technique is perhaps of paramount importance, as the accuracy of the results is an expression of the sincerity and perfection of the technique. It is my opinion that in research into the subject of iso-haem-agglutination future workers should be overcautious, their technique beyond question and every possibility of error should be strongly guarded. This must be admitted

when it is realized that of the structure of these iso-agglutinins and agglutinogens we know nothing and of the fundamental nature of their inter-reaction we know nothing.

The following precautions are important in carrying out cross-agglutination tests.

1. Sterility is desirable.
2. Sufficient time must be allowed for agglutination to occur before a record of each test is made.
3. A standard quantitative dilution of corpuscular suspensions should be made in each instance.
4. Microscopical examinations of each test are necessary.
5. Corpuscles should be examined within twenty-four hours of taking the blood sample.
6. Pseudo-agglutination, rouleaux-formation and incipient coagulation must be able to be differentiated from iso-haem-agglutination.

Though perhaps not essential, sterility is desirable since in this way any effects due to non-sterile apparatus or blood samples are controlled.

Now concerning the time factor. In a series of one hundred specimens of blood of white Australians which I grouped in 1926 using known Group II and Group III sera of high titre, I noticed that using one cubic centimetre of serum and one cubic centimetre of corpuscular suspension the "A-a" agglutination became visible macroscopically before the "B-b" agglutination. The former became visible macroscopically from fifteen seconds to five minutes after the mixing, but usually within two minutes, whereas the latter became visible macroscopically from thirty seconds to fifteen minutes after the mixing, but usually within five minutes. Simson has also found the titre of the A factor to be higher than that of the B factor in adult blood. Tebbutt and McConell state in their method: "The readings were checked under the microscope after about five minutes." Lee, who resorted to microscopical examination in doubtful cases only, states that in his method "the drop was well mixed by movements of the slide after five minutes and again after another five. The result was then read." The times allowed by these observers was in my opinion too short even for grouping white races and far too brief in investigating blood of unknown titre. I suggest that in both methods agglutinations of low titre might be passed over as non-existent.

The dilution of the corpuscular suspensions should be constant and produced quantitatively so that no apparent change in titre may occur, that the time factor may remain unaltered and that comparison of agglutination titre of different specimens of blood may be made possible. No doubt the need for microscopical examination varies inversely with the time allowed for agglutination to occur, since all true iso-haem-agglutination reactions become visible macro-

scopically when sufficiently long observed in point of time. I have, however, known this time to be as great as thirty-eight minutes and when performing hundreds of tests it is obviously impossible to observe each one for forty minutes or more, consequently some reliable compromise must be attained between the method of examination and the time of the reaction. In the method which I used, I consider that, as in one hundred and ninety-six agglutination tests no doubtful result was observed, the microscopical examination of each specimen tested after fifteen minutes is quite satisfactory.

Although it is now known that corpuscles, even when desiccated, maintain their agglutinizable substance in an active state for long periods, nevertheless the titre decreases as the age of the corpuscles increases. Consequently it is desirable to examine the corpuscles in a fresh state, so that agglutinations of low titre shall be as easily recognizable as possible.

Familiarity with the appearances of pseudo-agglutination, rouleaux-formation and incipient coagulation is very necessary, as they form an ever ready trap for the unwary and inexperienced. The appearances of rouleaux-formation and incipient coagulation are quite characteristic, but pseudo-agglutination may resemble very closely true iso-haem-agglutination. The main distinctions are as follows: Pseudo-agglutination (i) displays no specificity, (ii) does not tend to become macroscopically visible, (iii) the agglutination is usually of very low titre, (iv) the clumps do not increase in size on being vigorously stirred and may even be disrupted if stirred. Previous experience is invaluable in escaping errors of judgement made possible by these misleading appearances.

Summary.

1. The blood of certain full-blood Australian aborigines contains agglutinin-agglutigen systems which may not be recognized by testing the reactions for their corpuscles against Group II and Group III sera obtained from white people.
2. Full records should be kept of all aborigines investigated, so that, if necessary, they may be identified for the sake of further investigation.
3. For the sake of correct and homogeneous results future workers should employ a standard technique.

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Reports of Cases.

OPHTHALMIC RESULTS IN ENCEPHALITIS.

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THE following cases illustrate some of the widely different end-results which may occur in encephalitis. They have been recently observed in the medical service of the Ballarat Hospital or in private consultation.

All the patients were regarded as suffering from *encephalitis lethargica*, but in two of them the exact diagnosis was called in question and the condition was eventually regarded as severe encephalitis of atypical form. Not all these cases conform to type. Ophthalmic complications are common and varied and the end-results may be disastrous to vision as my cases show.

Case I.—External Ophthalmoplegia, Optic Neuritis.

Master J.E., aged eleven years, had the following signs and symptoms on admission: Severe headache, sleepiness, vomiting, purpuric rash over the body, temperature of 38.6° C. (101.6° F.), Kernig's signs, diminution of reflexes, absence of ocular signs, equal and reacting pupils. The onset of illness had been sudden. One week later paralysis of the external recti muscles of the eyes appeared. Next day I noted convergent strabismus, diplopia, paresis of associated movements laterally of the eyes, equal and reacting pupils, haziness, with venous congestion of the optic discs.

Two weeks later I noted that definite optic neuritis was present, disc edges were invisible, oedema amounted to three diopters on the right side and to over two diopters on the left. No hæmorrhages or effusions were seen.

One week after I made this note a crisis occurred, the temperature falling from 39.4° C. (103° F.) to normal and so remained. The papilloedema began to clear rapidly, though the sixth and fourth nerves remained affected.

Four months later the eyes were examined and found to be normal. There was no diplopia or squint, ocular movements were normal, vision in each eye was $\frac{5}{60}$.

Case II.—Combined Ophthalmoplegia.

Miss J.W., aged twelve years, was suffering from an illness which began on the previous day with diplopia, headache, vomiting, definite drowsiness, a temperature of 37.2° C. (99° F.). Her pupils reacted to light, but the left was larger than the right.

Three days later I noted that the disc edges were blurred; the vessels were engorged and tortuous. One week after this a complete left third nerve paralysis was quite evident and the fourth nerve on the left side was slightly involved. There was also a definite but moderate optic neuritis of the left disc with one linear hæmorrhage. After another twelve days it was found that the optic neuritis had completely cleared up, the hæmorrhage had disappeared and the disc edges were well defined. The third nerve paralysis still persisted. The temperature had never been above 37.2° C. (99° F.). Soon after this the patient was discharged.

One year later it was found that third nerve paralysis was present on the left side with outward squint of the eye. Estimation of the refraction revealed some hypermetropia with astigmatism of the left eye and after correction with glasses vision improved.

An advancement of the internal rectus muscle of the left eye will probably be necessary to make the eye straight.

Case III.—Metastatic Endophthalmitis.

Master T.W., aged thirteen years, was admitted to hospital with delirium, cervical rigidity, Kernig's sign

and absent knee jerks. The legs were drawn up, dyspnoea was present and the cerebro-spinal fluid was under increased pressure.

For some reason I did not see him till two weeks after admission, when I found that the ocular movements appeared normal, though examination was difficult on account of the noisy delirium. The media were so hazy that no view of the fundi was obtainable and the pupils would not dilate with atropine, apparently due to posterior synechia. Atropine drops were continued without effect. The eyes were not red.

High temperature and delirium continued for many weeks, while weekly examinations of the eyes revealed no change from the conditions first noted.

Three months later it was noted that both pupils dilated very moderately and irregularly under atropine, showing many adhesions to the lenses. It is the condition called seclusion of the pupil. There is an opaque reflex to the ophthalmoscope coming from in front of or behind the lenses. No fundus reflex was present; there was no nystagmus and ocular movements were good. Vision consists of perception of light only.

One year after the commencement of his illness I made the following final note: Examination shows the vitreous of both eyes to be filled with pseudo-gliomatous masses of fibrous tissue with vessels of new formation visible in them. The lenses are transparent. There is a nearly complete ring synechia in each eye. Vision is perception of light only. No operation is advised, but education in an institution for the blind is recommended.

Case IV.—Severe Optic Neuritis, Optic Atrophy.

A.B., aged four years, had a history of severe illness of several months' duration with signs and symptoms of encephalitis or meningo-encephalitis. The temperature was never above 37.8° C. (100° F.). The diagnosis was encephalitis. Gradual moderate enlargement of the cranium occurred. There were some doubts about the child's vision after two months of illness. When seen by me the child had been ill for four months. The fundi presented the appearance of optic atrophy of post-inflammatory type. The optic cups were filled with a translucent waxy organizing exudate. This is indicative of a recent severe optic neuritis. Vision was perception of light to a moderate degree. The prognosis is bad for vision. The child will require the education for the blind.

SEVERE HÆMORRHAGE TREATED BY TRANSFUSION.

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Young, New South Wales.

R.J., *ætatis* eighteen, a mill-hand, had twenty-six teeth extracted by a local dentist on October 23, 1927, under a general anæsthetic. For twenty-four hours there was no untoward symptom, but in the early hours of October 25 there was noticed by the night nurse a stain on the patient's pillow. Shortly afterwards the patient awoke, complaining of blood trickling down his throat. Examination disclosed a generalized oozing from all the tooth sockets and the cavities were tightly packed with adrenalin gauze. Six hours later the same symptoms recurred, although the packing remained in place. The packing was removed and fresh packing inserted. In three hours bleeding recommenced. The gauze was now removed again and the gums were tightly stitched all round. At every point in which the needle was inserted, oozing commenced a few minutes after the stitching of the gums was finished. Up to this stage all the usual local hæmostatics had been tried, including adrenalin, ferric perchloride, compound tincture of benzoin *et cetera*, without the slightest good effect. Hypodermic medication on the same lines was also tried, for instance, thirty cubic centi-

metres of horse serum were given every four hours for two days, after this two cubic centimetres of Parke, Davis's "Hemostatic Serum" were persevered with for three days, with no result. The same maddening oozing went on. A denture was tried with the idea of keeping up continuous pressure, but despite excellent apposition of this appliance by a very good dentist, the blood forced its way out round the margins of the gums. Caution was tried without avail. After a week of bleeding the patient was rapidly becoming exhausted. His pulse rate varied between 150 and 180 and the respirations were assuming a sighing character.

He was deadly pale and developed several oedematous swellings on different parts of the body. At this stage it was decided to do a blood transfusion, despite the obvious difficulties of this in a place where there was no pathologist. Six prospective donors were typed by the cross-agglutination method before a suitable one was found. He proved particularly suitable, also, from another point of view, for it was easy to obtain a pint of blood from the median basilic vein. This was mixed with seventy-five cubic centimetres (two and a half ounces) of sterile 3.8% solution of sodium citrate, kept at body temperature. The transfusion was done with a funnel and cannula into the left median basilic vein by gravity. It took one hour to let 660 cubic centimetres (twenty-two ounces) run in. The patient was returned to the ward in fair condition. Half an hour later he had a severe rigor and the axilla temperature rose to 40.5° C. (105° F.). He spent a comfortable night, however, and next day the temperature was 38.8° C. (101° F.). He said he felt better and certainly looked it. His pulse rate was steady at 130. The bleeding had stopped in the meantime and the patient made similar progress for six days. On the seventh day hæmorrhage recommenced and he bled freely for two days, despite the same kind of attempts to arrest bleeding that had been tried before. As he was rapidly going down hill again, another transfusion was done from a different donor and 330 cubic centimetres (fifteen ounces) of citrated blood were given. Hæmorrhage was again arrested and in a couple of days the patient began to pick up and took his food; the gums which had previously been very unhealthy in spite of careful cleansing by mouth washes *et cetera*, now began to heal. From having a very hopeless aspect the case took on a very healthy complexion and we were able to feed the boy with different preparations of liver, which was almost his sole diet for a fortnight after the cessation of the hæmorrhage. In another month he was discharged cured and has since resumed his usual occupation, three months after the onset of the bleeding.

An interesting feature of the case is the fact that the boy did not tell that he was a bleeder, although he was well aware of it. He said afterwards that several years before he bled for a month from a minor cut on the hand. Yet he took this risk, well knowing the danger, for he said he thought no one would extract his teeth if he divulged this information.

CONGENITAL ABSENCE OF THE ABDOMINAL WALL.

By W. M. A. FLETCHER, M.B., Ch.M. (Sydney),
Honorary Medical Officer, Western Suburbs District
Hospital; Honorary Medical Officer, Montrose Maternity
Hospital, Burwood, New South Wales.

MRS. L., a healthy young woman engaged me on August 8, 1927, to attend her in her second confinement which was expected about November 27, 1927. She has one very healthy child of five and has had no miscarriages. She had an abdominal section two years ago for ovarian trouble. She was well during pregnancy and the urine was normal throughout. She came into labour with a vertex presentation on November 29, 1927, and delivered herself naturally at 1.30 a.m. on November 30.

I was at another confinement when the nurse sent for me, so Dr. T. Y. Nelson went, but the baby was born before he arrived. I arrived a few minutes later in time to remove digitally an adherent placenta under anaesthesia induced by Dr. Nelson.

The mother who had an uneventful puerperium, did not suckle the infant. The baby was a female, weighed 2.7 kilograms (six pounds) and lived twenty-four days.

Apart from the abdominal condition to be described, the baby was a normal, healthy baby. Lying outside where the abdominal cavity should have been was a fairly large tumour, slightly pedunculated, covered only by thin parchment-like parietal peritoneum, through which could be very clearly seen the abdominal viscera and the peristaltic movements of the intestines. There was nothing of the nature of skin, subcutaneous or areolar tissues. The hypogastric region was the only place where any muscle was seen and here the origin of the recti could be made out. Above, along both costal margins, the skin covering the thorax became continuous with the peritoneum. Laterally the peritoneal-cutaneous junction was about the mid-axillary line. The peritoneum became continuous below with the skin a little above the pubes.

An attempt was made to push in the viscera in the same way that is used in the reduction of a hernia, but this was unsuccessful, as apparently there was no abdominal cavity. After a time, dry gangrenous patches were noticed in the peritoneum and a line of demarcation formed along the peritoneal cutaneous junction. Death was eventually due to inanition.

Dr. R. B. Wade saw the baby when it was fourteen days old and agreed that nothing could have been done at any time. After the confinement I was informed that the parents are first cousins and also that when the mother was about four weeks pregnant she saw a similar condition in an anatomy museum in Berlin!

Mrs. L. told me that on the voyage out from England she had a fall. Her husband informed me that this was considered to be an epileptic seizure. I have never seen anything in the patient suggestive of epilepsy.

Reviews.

A HOSPITAL HANDBOOK.

THE members of the staff of Saint Vincent's Hospital, Sydney, have compiled an account of the clinical and pathological methods employed in the hospital and have published this account in book form. In the preface it is stated by the editor, Dr. V. M. Coppleson, that no section or chapter has been written by any one person. This has the advantage of greater authority and eliminates personal views which may or may not be acceptable. The scheme further insures that the methods described are those regularly employed throughout the institution and not those used for one or other of the honorary medical officers. From the point of view of the reader the scheme carries with it a disadvantage, for it is not as a rule a wise expedient for several authors to combine in writing a single chapter of a book. The arrangement is a little haphazard. In sequence sterilization, minor surgical procedures, fomentations, enemata, blood transfusions, pathology, examination of urine, preparation for X ray examination, ophthalmic nursing, ear, nose and throat, nursing and management, the management of common skin affections, management of gynaecological cases, the care of plaster of Paris, what to do in cases of poisoning, general anaesthesia, complete records of a patient's illness, instruction to patients, calculation of the calorific value of a diet, normal calorie requirements and a number of tables comprise the subjects. The methods described in the several chapters are carefully evolved and are reliable. It is noticeable that the surgeon is responsible for the majority of the routine practices and that the physician

has had but little space allotted to him. No doubt this unequal distribution is the result of the greater need of hard and fast rules of procedure in surgery than in medicine. Be this as it may, the physician should have his instructions carried out with the same precision as is demanded by the surgeon. Parts of the book are addressed to nurses and there is no doubt concerning the excellence of the teaching. Some of the directions are intended for students. These too are admirable. But the authors and their editor would have achieved their objective more effectively had the distinction between these two parts been defined. In connexion with some of the subjects the messages to the nurses coincide with those to the students and a division then becomes unnecessary. For example the chapter on sterilization is full, exact and practical and will be found to be equally useful for nurses and for students. We notice that the newer chromium steel knives and other cutting instruments have not yet been introduced into the hospital. The difficulty of sterilizing a knife without spoiling its edge is overcome by this new form of rustless steel innovation. The instrument can be heated in the naked flame and remains sharp. Nurses will find the instructions concerning fomentations, enemata, the nursing care of patients with gynaecological conditions and with affections of the eye, ear, nose and throat and the proper way to handle plaster of Paris among others of the greatest value. Students will derive full benefit from the directions given for the carrying out of pathological and biochemical investigations in the diagnosis of various affections. The advice on the giving of anaesthetics is also helpful. The remedies to be applied to patients who have taken poison, are standard and the methods are easily followed. It is unnecessary to mention every part of the book, for it is all good as far as the subject matter is concerned, although it is not and cannot be regarded as exhaustive.

This little volume has defects. In the first place the multiplicity of authors rendered it essential for the editor to have rewritten the whole matter from cover to cover. He has not done this and the result is much ragged matter, much slovenly writing, many mistakes in spelling and not a few inconsistencies in expression. The confusion between cases, casings, instances, examples, patients, examinations and lesions is unfortunate. There are too many printer's errors and the general appearance of the printed page is far from pleasing. It is not unlikely that the virtues of this little book will lead to a demand for a second edition within a short time. If this prediction eventuates, we would suggest that the editor rewrites the book, after he has noted the defects, and insists on the adherence to the accepted rules of typography. Notwithstanding these critical remarks, we can recommend this edition to all who have direct or indirect charge of a hospital.

A DERMATOLOGICAL HANDBOOK.

"THE COMMON DISEASES OF THE SKIN: A HANDBOOK FOR STUDENTS AND MEDICAL PRACTITIONERS," by R. Cranston Low, of Edinburgh, is another excellent work on dermatology.¹

An essential to a treatise on skin diseases is to have many and detailed illustrations; this small work of some two hundred pages has sixty-eight, of which some are in colour and all are splendid and well deserve special mention for their sharpness of detail.

In the differential diagnosis syphilis has been taken into account, but unfortunately the author has not given a chapter to this important disease. Had it been included it would have made this the best small book on diseases of the skin. The local treatment of psoriasis has been gone into for some length as also have the various types of tinea and acne.

The book is excellent and can be thoroughly recommended.

¹"Clinical Handbook for Residents, Nurses and Students," Edited by Victor M. Coppleson, M.B., Ch.M., F.R.C.S., 1928. Sydney: Angus and Robertson, Limited. Crown 8vo., pp. 153.

¹"The Common Diseases of the Skin: A Handbook for Students and Medical Practitioners," by R. Cranston Low, M.D., F.R.C.P., 1927. Edinburgh: Oliver and Boyd. Crown 8vo., pp. 235, with illustrations. Price: 14s. net.

The Medical Journal of Australia

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Food Values for Children.

IT has frequently been stated that it required a great war to reveal the full extent of the physical disability of the nation. The effect of the war was to increase that physical defect. Added to the loss of a very large number of young men in perfect health and full muscular development, a further factor has been introduced making for physical deterioration. In the post war reaction discipline and the recognition of parental authority on the part of children has disappeared and with it the refusal to work hard has made its appearance. In order to combat the tendency for further deterioration a determined effort will be required and attention will have to be paid to both the physical and the mental aspects of education. The hereditary factor may be ignored, for it cannot be assumed that the nation as a whole has changed. The present intolerance of control and licentiousness is a phase. It has held the world before and has given room to the other extreme after a time. The duration of the phase will be dependent on the energy of those who recognize the advisability of the avoidance of extremes. Publicity and demonstration are the two instruments that are the most effective in restoring moderation to a disturbed generation.

One of the big factors in the production of a virile and sound young race is the provision of an adequate diet. The first essential is to determine the minimum diet that will suffice to keep school children in health and to enable them to grow at a satisfactory rate. For practical purposes it is necessary to have information concerning the caloric value of each item of the diet. It has been pointed out in these columns on many occasions that it is useless to employ figures obtaining in other countries. Very few accurate determinations of the

caloric values of foodstuffs have been published in Australia, but it has been shown that the protein, fat and carbohydrate content of some of the staple foods vary widely in different parts of the Commonwealth.

It is held that a man doing heavy manual work requires a daily diet equivalent to between four and five thousand large calories. Of course, much must depend on the height, weight and body surface of the man and on the actual amount of energy expended at his work. The basal metabolism of a man weighing about sixty kilograms is said to be approximately 1,860 calories. A child of five years is said to oxidize about 40% of the amount used by an adult man. It is dangerous to calculate from the adult to the child, because provision must be made for growth in the child, while the adult male may have to expend a very large amount of energy in performing heavy tasks repeated over a considerable period of time. The influence of occupation is seen when the figures for men and women with sedentary work are considered. A male weighing sixty kilograms is supposed to burn food equivalent to 2,500 calories, while a woman weighing fifty kilograms will need a diet yielding 2,000 calories. The difference in the basal metabolism will be approximately 320 calories. A man carrying out heavy manual work may consume a diet yielding 4,000 calories, while a woman working hard is said to use food to the extent of 2,800. It seems certain that a big woman doing work that entails the lifting of heavy weights at frequent intervals, will lose weight with a diet of this value. Some guidance in regard to the diets required by children between the ages of six and eleven years has recently been given by Dr. H. C. Corry Mann in a very painstaking investigation in a model village school close to London. He showed that boys weighing on an average twenty kilograms gained 1.8 kilograms and grew five centimetres in one year when given a diet yielding between 1,679 and 2,154 calories. The protein, fat and carbohydrate balance was by no means ideal. When the diet was increased by the addition of milk yielding 388 calories, the increase in growth was over six and a half centimetres and the increase in weight was

over three kilograms in one year. It would be futile to borrow the figures from Dr. Corry Mann and apply them to Australian school children. The environment, the habits, the climate and the children themselves are quite different. It is essential that a properly planned and carefully conducted series of experiments should be undertaken in every part of Australia. The amount of food actually consumed must be calculated, not the amount provided. The composition of each item of food must be determined by actual analysis. It must be remembered that the variation of the food value of milk may amount to over 20% according to the season of the year, the feed given to the cows, the temperature and rainfall and many other factors. A litre of milk from a good dairy farm in Queensland will yield much more energy than a litre of milk bought in a shop in Sydney. Similarly the number of calories obtained from a kilogram of mutton or beef will vary considerably in different parts of Australia and at different times. Definite standards may be difficult to fix, but it should be possible to determine maxima and minima for each class of food in typical districts and under certain climatic conditions. The experiment would have the object of ascertaining not only the optimum caloric value of diets for children of school ages, but also the distribution of the food values among the main ingredients. That this is essential will be realized, for while underfeeding on a large scale leads to national disaster, overfeeding may engender a weakly, self-indulgent race. In an experiment of this nature the question of the accessory food factors would be taken into account.

If this experiment were conducted as a serious piece of research, it would follow that much active propaganda would be required to educate the public so that the significance of the results might be appreciated. The most important period of life in this connexion is the growing period of school children. Infinitely more harm is inflicted on the child by improper dieting than on the adult and the harm so inflicted has a far greater significance for the nation. This is a matter that should be fathered by the Department of Health of the Commonwealth.

Current Comment.

HEART DISEASE AND PREGNANCY.

THE advent and progress of pregnancy make certain demands on the heart, the demands are progressive and the heart meets them by calling on its reserve force. The stress is partly a mechanical one, the weight of the growing foetus alone is important, but there is also a considerable amount of abdominal displacement. A certain amount of compensation occurs as a result of the opening out of the subcostal angle and separation of the lower ribs. The heart itself may be displaced upwards and in these circumstances any increasing pressure will be felt chiefly by the right ventricle. Pregnancy also brings with it a definite blood plethora. The mother has two or more individuals to support. Nutriment must be carried to the foetus by the placental blood and the vascular field is increased both by the growth of the large placental vessels and by the expansion and growth of the uterine walls. Cardiac hypertrophy and dilatation often occur and murmurs may become audible. Virchow reported slight evidence of fatty degeneration in the myocardium of pregnant women. As a rule, however, pregnancy passes without leaving in its wake any demonstrable cardiac lesion—the cardiac reserve is equal to the occasion. If the heart is a damaged organ as the result of some antecedent infective process, there will be some impairment of the reserve power. The ability of the heart to withstand the stress of pregnancy is thus reduced to the question of reserve power. Modern cardiology has done a great deal towards determining this reserve power, cardiologists think in terms of muscle and not of murmurs, but unfortunately there is no standard pregnancy. It is thus often a matter of great difficulty to determine whether a patient's heart will be able to stand up to what will be required of it.

In discussing the crippled heart and its ability to meet the strain of pregnancy, John Hay and Elizabeth Hunt have recently pointed out that three things have to be remembered.¹ In the first place in rheumatic valvular disease the myocardium is probably damaged as well as the valves. In the second place, in mitral stenosis which is the commonest lesion, the output of blood per minute is considerably diminished and there is persistent engorgement of the alveolar walls and an engorged alveolar wall is inelastic; emphysema is also present not infrequently together with the inevitable dependence on free movement of the diaphragm. In the third place auricular fibrillation is a grave handicap to any heart and a very serious additional load in pregnancy and labour; it is probably the most disastrous of all the cardiac disabilities in labour. Hay and Hunt have recorded fifty consecutive cases of pregnancy and parturition in patients with crippled hearts. One of these patients suffered from congenital heart disease, twenty from

¹ *The Lancet*, February 11, 1928.

a moderate degree of mitral stenosis and fifteen from an advanced degree of this lesion, seven suffered from mitral stenosis and aortic regurgitation, two from aortic regurgitation and five from auricular fibrillation. Four of those with auricular fibrillation had also advanced mitral stenosis and one had aortic regurgitation in addition to mitral stenosis. Thirteen of the patients were *primiparæ* and three died and thirty-seven were *multiparæ* and two died. It is interesting to note that the five patients who died, suffered from advanced mitral stenosis and that one of them had aortic regurgitation in addition. The pregnancy of twenty-eight of the women was terminated by natural forces and one of the patients who died, was in this group. Three were delivered by forceps. The labour of thirteen was induced and two of the patients who died, were in this group. Five were delivered by Cæsarean section and two of these died. One patient died undelivered.

It is a little difficult to gather from the article by Hay and Hunt how many of the patients received ante-natal treatment. Apparently most of them did, for treatment is mentioned in the epitome of the histories of the five patients who died. It is from fatal cases of a disease that much as a rule can be learned about the disease. Unfortunately only two *post mortem* examinations were obtained in these five deaths. In one a large white kidney was found and in the other parenchymatous nephritis. In the opinion of the pathologist this nephritis in both instances was of recent origin. Hay and Hunt believe that a woman who is suffering from advanced mitral disease, is liable to develop an atypical form of parenchymatous nephritis as a result of pregnancy. They point out that the combination of mitral stenosis with chronic nephritis is well known and is more common in women than in men and they express the opinion that pregnancy may be the determining factor in the preponderance. In view of this expression of opinion it is a pity that the histories of the patients have been so condensed that no biochemical findings of blood examinations have been given. It will be remembered that in their clinical and biochemical study of the toxæmias of pregnancy Cruickshank, Hewitt and Couper laid great stress on the examination of the blood and urine (see THE MEDICAL JOURNAL OF AUSTRALIA, February 4, 1928). The question raised by Hay and Hunt of the relationship between the "toxæmia of pregnancy" nephritis and mitral disease offers a fruitful field for research.

The occurrence of five deaths among fifty pregnant women with cardiac disability represents a high percentage mortality. The only way to combat such a mortality is by careful supervision and treatment. The need for ante-natal care in the treatment of patients with cardiac disease was exemplified in a communication made in 1927 by Robinson, of Liverpool. He reported eighteen pregnancies in which mitral stenosis and auricular fibrillation were present. The patients had received no adequate ante-natal treatment and many of them were admitted to hospital in emergency. Thirteen

of them died before, during or soon after delivery. In a series of 1,042 patients treated at an ante-natal clinic in Brisbane Marshall Allan reported twelve cases of mitral stenosis with one death (see THE MEDICAL JOURNAL OF AUSTRALIA, March 13, 1926). The two series are not strictly comparable, because the symptoms in the Brisbane series were in the majority mild. It is justifiable to conclude, however, that the symptoms in the patients of the Liverpool series would not have been so severe had they received adequate ante-natal care. It is necessary to consider the question of allowing patients with cardiac disease to marry and, if they are married, of allowing them to have children. The question of veto in both these contingencies is mentioned by Hay and Hunt. In regard to the latter they do not recommend any particular contraceptive method. Most medical practitioners will agree that contraception should be taught to and practised by a woman who is married and who has a serious heart lesion. Hay and Hunt point out that, as long as the cardiac reserve is good, as long as the response to effort is satisfactory and if there is no undue enlargement of the heart, the presence of valvular disease is no bar either to marriage or pregnancy. When, however, there is a clear history of cardiac failure and distress during a previous pregnancy or if convalescence after labour was unduly prolonged owing to cardiac weakness, a definite veto must be given. The same holds good in regard to patients with auricular fibrillation, advanced mitral stenosis or advanced aortic regurgitation. Hay and Hunt do not, however, lay emphasis on the fact that the decision as to cardiac reserve must rest in the last instance with one who has been trained in modern methods of examination of the heart. It must not be supposed that a careful observer will not be able to form a reliable opinion in most cases from the history and from the ordinary methods of clinical examination. Undoubtedly he will. Many occasions will arise, however, in which myocardial damage can be detected by the electrocardiograph only. It is therefore important that greater attention should be paid to this side of medical practice in obstetric hospitals.

There remains to be considered what means should be adopted to terminate pregnancy when this is necessary. The methods used in the series of Hay and Hunt have been enumerated. The first consideration must be the adoption of a method which will throw as little extra stress as possible on the heart of the mother, the second will be the production of a living child. The opinions of many men on the relative values of induction and Cæsarean section could be quoted. As a rule these persons have a *penchant* for one method and they often base their conclusions on but few cases. To arrive at any satisfactory conclusion from clinical experience it would be necessary to investigate a carefully controlled series of perhaps one thousand cases. In any event no hard and fast rule could be laid down, but definite guiding principles would be evolved and the man who ignored them, would do so with his eyes open.

Abstracts from Current Medical Literature.

UROLOGY.

Unilateral Renal Aplasia.

D. W. MACKENZIE AND A. B. HAWTHORNE (*American Journal of Surgery*, July, 1927) describe six cases of absence or very rudimentary development of one kidney. They group all such cases under the one term, aplasia, for the sake of convenience. They hold that unilateral aplasia is not uncommonly seen in urological practice, the lesion being more common on the left side. At the same time there is usually some disease present on the opposite side and this brings the patient under the surgeon's care. There may be unexplained pain on the side of the aplasia. In some instances no renal tissue was found at all, while in others there were small nodules or cysts containing some renal tissue, but without pelvic formation. The ureter, being developed from below, may be present throughout a varying portion of its normal length.

Suprapubic Cystotomy in Bladder Paralysis.

M. L. BOYD (*Journal of Urology*, October, 1927) holds that sufficient attention has not been paid to the value of suprapubic cystotomy for urinary drainage in acute paralysis of the bladder, such as results from an injury of the spinal cord or acute infection in the spinal canal. When the paralysis is extensive enough to result in a definite over-distention of the bladder, which must be relieved by overflow or catheterization, suprapubic drainage with a de Pezzer catheter is definitely indicated. To permit such patients to suffer from the ill-effects of chronic over-distention, even if moderately satisfactory micturition should result, is to expose their lives to unnecessary danger. If there is recovery from the paralysis, the drain may be removed and normal urination is subsequently resumed. The de Pezzer drain always works very satisfactorily and keeps the patient quite dry. By affording constant relief to back pressure on the kidneys it obviates infection of these organs, the most important source of danger to the kidneys.

Acute Gonococcal Epididymitis.

H. K. WADE (*Journal of Urology*, October, 1927) advocates a special line of treatment in acute gonorrheal epididymitis with a view to preventing the subsequent development of azoospermia. With the usual methods of treatment (elevation, rest and various applications) the end result is practically the same. A gonorrheal nodule which is a cicatrization, always remains and sterility follows in a large percentage, especially if bilateral infection has been present. Early epididymotomy assures free drainage

of the affected part, lessening the cicatrization in the *globus minor* and the *vas deferens*. By the process of drainage the seminal vesicles, prostate and urethra are enormously benefited. Drainage also lessens the possibility of metastasis to other parts and last but not least, there is immediate relief of pain with rapid reduction of the hyperpyrexia and the danger of sterility is greatly diminished. In order to be moderately sure of preventing azoospermia the surgeon should perform the operation at an early date. In the first stages, before the swelling has become very noticeable or the pain severe, abortive treatment by rest, elevation and ice application may be used; this is supplemented by the intravenous injection of one gramme of calcium chloride once a day until the pain disappears. At this stage the *vas* may be punctured and an antiseptic may be injected into the affected vesicle with very satisfactory results. Should the symptoms not regress within a few days, epididymostomy is indicated.

Acute Gonococcal Prostatitis.

A. J. CASARIEGO (*Journal of Urology*, October, 1927) considers that in cases of retention of urine due to acute gonococcal prostatitis perineal prostaticotomy should be performed without delay. The prostate is exposed and a deep longitudinal incision is made in each lobe in order to open up and disinfect the interior of the gland. Early prostaticotomy prevents the later formation of abscess of the prostate with resulting "caverns", opening by fistulae into the posterior part of the urethra. Moreover, the onset of chronic prostatitis can often be avoided by this operation.

A New Haemostatic Bag for Perineal Prostatectomy.

E. DAVIS (*Journal of Urology*, August, 1927) describes his new distensible bag for obtaining haemostasis in the prostatic cavity after perineal prostatectomy. This bag resembles both the Hagner and the Pilcher bags, but incorporates several valuable improvements. Thus the Davis bag is maintained in place by means of direct traction *via* the perineal incision and counter traction against the perineum rather than by indirect traction *via* the urethra. Secondly, in the absence of a suprapubic fistula, adequate provision for urinary drainage is secured by means of a large, stiff-walled rubber tube which traverses the bag from base to apex without communicating with its interior. The traction on the bag is by means of a tape attached to a rubber loop near the apex of the bag. This tape runs out of the perineal incision where it is kept on the stretch by being attached to a perforated metal plate lying flat on the perineum; by the plate counter traction is maintained. The wide base of the bag fits snugly into the open upper or vesical end of the prostatic cavity and keeps the torn edges of the vesical mucosa well down in place against the wall of the

prostatic cavity. The apex of the bag lies in the anterior part of the prostatic portion of the urethra. The bag is distended with air through a very thin tube which opens into the bag near its apex. The bag is introduced with a clamp and in difficult cases the introduction is facilitated by first stretching the prostatic cavity with a specially designed four-bladed dilator.

Infection of the Prostate Gland.

W. VON LACKUM (*Journal of Urology*, September, 1927) discusses the difficult subject of chronic prostatitis. He emphasizes the fact that a large proportion of prostatic infections are of haematogenous origin, arising originally in the teeth, tonsils *et cetera*. Conversely a prostatic infection may itself be the source of an infection which often settles down in the joints, bones, nerves, muscles, eyes *et cetera*. Chronic prostatitis may be so latent that at the first massage only a very few pus cells may appear in the smear. In such cases when a more deeply seated infection is suspected, repeated massages, dilatation or silver nitrate instillations may act provocatively and allow the microscope to reveal the real degree of infection from later smears. Even when the infection seems slight, judged from the number of pus cells per field, culture may reveal virulent strains of bacteria. An aetiological relationship can be demonstrated both experimentally and clinically between the infective prostatic secretion and metastatic lesions. Even though it is usually impossible to eradicate prostatitis entirely, the clinical response to treatment is quite satisfactory when the infection has been reduced to a low degree.

Aspiration of the Testicle in Sterility.

M. HUBNER (*Journal of Urology*, January, 1928) confirms the value of the previously reported method of aspiration of the testicle in the diagnosis of sterility. No operation for the relief of sterility in the male should be undertaken until this procedure has been carried out. By this means the surgeon can determine whether or not the azoospermism is due to occlusion in the vasa or the epididymes or to a pathological condition of the testicle itself. It should be remembered that while a thickened or nodular epididymis is suggestive, it is not absolute proof that the tube is obstructed. On the other hand there is a form of epididymitis and vasitis in which the inflammation has caused occlusion without the occurrence of any palpable thickening. In these cases there may be no definite history of an acute attack of epididymitis and yet the occlusion results. Again, in some cases of gonorrhoea the inflammation does not stop at the epididymis, but spreads to the testicle, completely destroying its spermatogenic function, so that even if the obstruction in the duct were relieved

by operation, it would be of no benefit to the patient. In 44% of the author's patients who suffered from epididymitis, no spermatozoa were found on aspiration of the testicle. On the other hand in about 40% of those with azoospermia, spermatozoa were found in the testicle. The technique is simple; a hypodermic syringe with a needle of rather large bore is used and is plunged into the body of the testicle. Aspiration is commenced and is continued slowly as the needle is withdrawn. The point of the needle is then placed on a slide and a small part of the fluid is expelled, covered with a cover slip and examined. Then successive portions are examined. As a rule even in healthy testicles the number of spermatozoa found are few and they are never as actively motile as in a condom specimen. Very often they are motionless, as they are not as yet fully developed, but must not on this account be considered as dead.

DERMATOLOGY.

Congenital Keratoses with Bullæ.

W. N. GOLDSMITH (*The British Journal of Dermatology and Syphilis*, February, 1928) describes a case of congenital ichthyosiform erythrodermia and discusses similar cases in the literature of the subject. His object is to study the nature of the bullæ. In the author's patient, a boy, aged seven years, the appearance of bullæ and a rise in temperature occurred irregularly. No impetiginous crusting or scarring took place. Bacteriological examinations were made, the fluid of five different bullæ was cultured on veal broth agar. Numbers 4 and 5 contained only *Streptococcus pyogenes*, Numbers 2 and 3 yielded colonies which looked exactly the same as those of Numbers 4 and 5, but it was difficult to distinguish them from the transparent form of *Staphylococcus albus*. None contained *Staphylococcus pyogenes aureus*. The author is of the opinion that most of the cases referred to in the literature are not cases of *ichthyosis vulgaris*, but examples of congenital ichthyosiform erythrodermia. In distinguishing between the two conditions histologically it is to be remembered that in the former the granular and mucous layers are thinner and the papillæ are poorly developed with diminished sweating. In congenital ichthyosiform erythrodermia the opposite condition is found. In summing up the author states that the condition was one of congenital ichthyosiform erythrodermia and that it was accompanied by a persistent streptococcal impetigo and fever of unknown origin. *Ichthyosis vulgaris* is extremely rarely, if ever, accompanied by persistent bullous. Congenital ichthyosiform erythrodermia is rather more commonly, though still rarely so associated. Probably over activity of the sweat glands—a common feature—predisposes both to infective and to traumatic bullous and may even be a direct cause. The mechanism is obscure. There is no

fundamental relationship between bullous and keratosis. In only three cases besides the author's is there a record of a bacteriological examination. In two of them streptococci were found.

Excretion of Sugar in Sweat.

B. USHER AND I. M. RABINOWITZ (*Archives of Dermatology and Syphilology*, December, 1927) give the results of a series of experiments on the sweat of normal persons and those suffering from eczema. The experiments were undertaken with a view to investigating the relationship between eczema and a disturbed metabolism of carbohydrates. In some patients who have both diminished tolerance for sugar and eczema, it has been noted that the latter condition has cleared up rapidly following the institution of diets of low carbohydrate content. The procedure for the collection of sweat was that described by Barney in *The Journal of the American Medical Association* in October, 1925. The method of analysis was a slight modification of the method of Folin and Wu. The authors found that a fermentable reducing substance, assumed to be dextrose because of the procedure followed, was a normal constituent of sweat and the rate of its excretion was followed. The rate was found to be increased in eczema when the tolerance for sugar was lowered. The volume of sweat in these circumstances was increased. A causal relationship between the excretion of sugar and eczema is suggested.

Erythema Multiforme.

C. LEVADITI (*La Presse Médicale*, January 18, 1928) makes some additional remarks on the aetiology and clinical characteristics of *erythema multiforme*. Reference is made to a paper on the subject in the *Académie des Sciences* in April, 1925, and a subsequent corroboration of the findings by E. H. Place, L. E. Sutton and O. Willner in America. A streptobacillus which has been termed *moniliformis*, was isolated from the blood in about 62% of cases. Clinically the condition is a septicæmia with an erythematopapular eruption chiefly attacking the lower limbs on the extensor surfaces. Arthritis and heart lesions have been reported. In other cases the general symptoms are more intense with an eruption appearing on the extremities and leaving pigmentation and desquamation. The organism has the shape of a baton with rounded ends, forming filaments. It is Gram-negative.

Bismuth Thioglycollate in Experimental and Clinical Treatment of Syphilis.

O. M. GRUZHIT, E. LYONS AND R. PERKINS (*Archives of Dermatology and Syphilology*, May, 1927) have undertaken experimental work on bismuth thioglycollate for the purpose of finding a substance which can be injected intramuscularly in water solution without causing injury to the tissues and which will not form in-

soluble deposits at the site of infection. Gruhitz has shown that the potassium bismuth tartrate will not fulfil these conditions. The treatment does of bismuth thioglycollate is between 1.3 and 2.5 milligrammes per kilogram of body weight. It does not produce any injury to the tissues and in the above dosage albuminuria was not produced in animals. In a course of ten injections the blood urea nitrogen was not affected and there were no histological changes in the liver, spleen and kidneys. Pathological changes, however, were noticed when a dose of 5.2 milligrammes was given. Bismuth thioglycollate is absorbed from the site of injection in less than two hours. When syphilitic rabbits were treated with from seven to ten injections their lymphatic glands became innocuous to normal rabbits in 30%, 50% and 100% of the cases with a respective dose of 1.3, 1.6 and 2.0 milligrammes per kilogram of body weight. A limited clinical experience indicates that bismuth thioglycollate produces a somewhat more rapid improvement in lesions than do the insoluble bismuth compounds. The patient can be saturated readily without danger of cumulative action. The response to the Wassermann test was rapidly influenced.

Ichthyosis Bullosa.

J. M. H. MACLEOD (*British Journal of Dermatology and Syphilis*, February, 1928) reports two unusual cases of ichthyosis associated with bullæ. In the first case, that of a girl, aged six years, practically the whole cutaneous surface was affected by the ichthyosis except the palms and soles. The bullæ had commenced only in the last six months, attacking the legs first and later on the arms and trunk. A microscopical and cultural examination of the recent bullæ yielded no organisms. Some of the bullæ were localized at the sites of friction and pressure. In the second case, that of a boy, aged nine months, the ichthyosis and bullæ were present from birth. The condition was first diagnosed as chronic pemphigus. The bullæ appeared chiefly where the skin was thickest and were not prevalent where traumatism was most likely to take place. The general health of the child is good. In commenting on these cases the author refers to the difficulty of their classification. It was suggested that they were cases of ichthyosis in which bullæ had developed from secondary infection or again that they were examples of *epidermolysis bullosa*. The condition of the second patient resembled Ritter's *dermatitis exfoliativa infantum*. It was not possible to determine whether dystrophy of the elastic tissue of the skin was present. Acanthosis and keratosis were present and there was a lack of cohesion between the epidermis and corium. Treatment was unsatisfactory. To keep the skin clean and soft and prevent sepsis was all that could be done. Thyroid gland extract was tried without effect.

British Medical Association News.

ANNUAL MEETING.

THE ANNUAL MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on March 29, 1928, Dr. S. A. SMITH, the President, in the chair.

ANNUAL REPORT OF THE COUNCIL.

THE HONORARY SECRETARY presented the annual report of the Council and moved that it be received. The report is as follows:

THE COUNCIL presents the following report on the work of the Branch for the year ended March 29, 1928.

Membership.

The membership of the Branch is now 1,661, as compared with 1,593 at the date of the last report, showing a net increase of 68.

The additions have included elections and resumptions of membership, 103; removals into the area of the Branch, 41. The losses have included resignations, 4; removals out of the area of the Branch, 33; default in payment of subscription, 22; deaths, 17.

The losses by death have been: Dr. H. L. HARRIS, Dr. T. H. FIASCHI, Dr. MILES KITE, Dr. E. P. McDONNELL, Dr. E. W. FERGUSON, Dr. A. A. O'HARA, Dr. A. J. BRADY, Dr. J. S. F. BARNET, Dr. N. J. DOWLING, Dr. W. E. J. PARADICE, Dr. C. W. REID, Dr. E. H. BINNEY, Dr. D. J. S. BURT, Dr. H. C. M. DELOHERY, Dr. W. SHORTT, Dr. B. C. KENNEDY.

Meetings.

Ten ordinary meetings of the Branch, including the Annual Meeting, three extraordinary meetings and seven clinical meetings were held. The average attendance was 51. The ordinary meetings, as follows, were held in conjunction with meetings of sections, namely: April 28, with the Section of Neurology and Psychiatry and the Section of Pediatrics; May 26, with the Section of Radiology and the Section of Surgery; June 23, with the Section of Pediatrics, the Section of Obstetrics and Gynaecology and the Section of Surgery; July 28, with the Section of Obstetrics and Gynaecology and the Section of Neurology and Psychiatry; August 25, with the Section of Surgery, the Section of Medicine and the Section of Radiology; October 27, with the Section of Orthopaedics and the Section of Obstetrics and Gynaecology and November 24, with the Section of Pathology and Bacteriology and the Section of Medicine.

The meeting of December 8 took the form of a social evening to which the 1927 graduates in medicine of the University of Sydney were invited.

The extraordinary meetings of June 23 and August 25 were concerned with the passing of the revised Articles and By-laws. The clinical meetings were held at Saint Vincent's Hospital, the Royal Prince Alfred Hospital, the Sydney Hospital, the Royal North Shore Hospital of Sydney, the Royal Alexandra Hospital for Children, the Mental Hospital, Gladesville, and the Coast Hospital, Little Bay. The business of the meetings during the year included twenty-one papers and addresses and numerous reports of cases and exhibits and lantern demonstrations.

Representatives.

The Branch was represented as follows:

- Council of the British Medical Association:* (1926-1927) Sir T. JENNER VERRALL, LL.D., Vice-President of the British Medical Association; (1927-1928) Dr. T. P. DUNHILL, C.M.G.
- Representative Body* (1927-1928): Representative, Dr. S. A. SMITH; Deputy Representative, Dr. R. GORDON CRAIG.
- Federal Committee of the British Medical Association in Australia:* (1927) Dr. J. A. DICK, C.M.G., Dr. R. H. TODD; (1928) Dr. J. A. DICK, C.M.G., Dr. R. H. TODD.

(d) *Australasian Medical Publishing Company, Limited:* Dr. GEORGE ARMSTRONG, Dr. T. W. LIPSCOMB, Professor F. P. SANDES.

(e) *Council of the Bush Nursing Association* (1927-1928): The President, Dr. S. A. SMITH.

(f) *Council of the Royal Society of the Welfare of Mothers and Babies:* Dr. R. B. WADE, Professor J. C. WINDEYER.

(g) *Board to Control Campaign Against Tuberculosis:* Dr. S. A. SMITH.

Council.

(a) The attendance of the members of the Council and of the standing committees was as set out in the table on the next page.

(b) The representatives of the Local Associations of Members, appointed on the invitation of the Council to attend the regular quarterly meetings of the Council, were as follows: Dr. G. A. BUCHANAN (Central Southern); Dr. K. S. MACARTHUR BROWN (Central Western); Dr. A. MAITLAND GLEDDE (City); Dr. R. J. TAYLOR (Eastern Suburbs); Dr. W. F. SIMMONS (Illawarra Suburbs); Dr. A. MACINNES (Northern District); Dr. G. M. BARRON (Northern Suburbs); Dr. T. M. FURBER (South Sydney); Dr. J. BROOKE MOORE (Western); Dr. H. B. OXENHAM (Western Suburbs).

Library.

Dr. J. A. DICK was again appointed to the position of Honorary Librarian. Donations of books and periodicals were received from the AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED, Dr. E. M. HUMPHREY, Dr. L. COWLISHAW, Dr. R. W. H. MAFFEY, Dr. G. M. HAY, Dr. F. BARRINGTON, Dr. V. M. COPPLESON, Dr. E. E. PITTMAN and others. Dr. L. COWLISHAW kindly presented ten engravings of members of the medical profession of historic interest, uniformly mounted and framed. The Far Eastern Association of Tropical Medicine Congress, 1927, was subscribed to for the purpose of obtaining the proceedings of the Seventh Congress, Calcutta. The *Annals of Surgery* has been added to the list of journals subscribed to. A holograph letter of Sir Joseph Lister, dated February 5, 1887, was received, together with photographs of two other letters dated respectively January 5, 1887, and December 21, 1894. These have been framed and will be kept among the possessions of the Association.

Affiliated Local Associations of Members.

The following is a list of the Local Associations of Members and their Honorary Secretaries:

- Balmain District:* Dr. L. B. HEATH (Balmain).
Border: Dr. R. AFFLECK ROBERTSON (Albury).
City: Dr. H. A. RIDLER (159, Macquarie Street, Sydney).
Central Northern: Dr. A. T. ROBERTS (Newcastle).
Central Southern: Dr. R. G. WOODS (Goulburn).
Central Western: Dr. K. S. MACARTHUR BROWN (Parramatta).
Eastern Suburbs: Dr. R. J. TAYLOR, M.C. (Randwick).
Eastern District: Dr. A. MUSCIO (Taree).
Illawarra Suburbs: Dr. W. F. SIMMONS (Bexley).
Northern District: Dr. R. J. JACKSON (Armidale).
North Eastern: Dr. A. J. OPIE (Lismore).
Northern Suburbs: Dr. E. M. HUMPHREY (185, Macquarie Street, Sydney).
Southern District: Dr. C. R. SIM (Wagga).
South Eastern: Dr. H. H. LEE (Wollongong).
South Sydney: Dr. J. G. HUNTER (Mascot).
Western: Dr. S. R. DAWES (Orange).
Western Suburbs: Dr. J. F. WALTON (Summer Hill), Dr. W. M. A. FLETCHER, Assistant Secretary (Haberfield).

Annual Meeting of Delegates.

The fifteenth annual meeting of the delegates of the Affiliated Local Associations of Members with the Council was held on October 7, 1927, at the B.M.A. Library, Sydney.

An account of the meeting appeared in THE MEDICAL JOURNAL OF AUSTRALIA of November 5, 1927, at page 658 and a report of the proceedings was sent to the several local associations. The delegates present at the meeting were as follows: DR. W. B. GRANT (Balmain District), DR. R. A. ROBERTSON (Border), DR. A. T. ROBERTS (Central Northern), DR. G. A. BUCHANAN (Central Southern), DR. K. S. MACARTHUR BROWN (Central Western), DR. A. M. GLEDDEEN (City), DR. F. O. STOKES (Eastern District), DR. F. G. N. STEPHENS (Eastern Suburbs), DR. W. F. SIMMONS (Illawarra Suburbs), DR. E. B. FITZPATRICK (Northern District), DR. O. A. DIETHELM (North Eastern), DR. H. J. F. NORRIE (Northern Suburbs), DR. W. W. MARTIN (Southern District), DR. H. H. LEE (South Eastern), DR. N. M. A. ALEXANDER (South Sydney), DR. R. J. NIXON (Western Suburbs), DR. S. R. DAWES (Western).

It was noted with satisfaction that delegates from all the local associations were present.

The areas of the local associations of members extend from north to south of the State and from east far away towards the west and comprise a total area of nearly twenty thousand square miles. By means of the annual meeting of the delegates, the local associations are brought into close relation with each other and into touch with the Council. It is thought that in this way a more vigorous corporate life is developed in the Association as a whole throughout the State.

Sections for Special Branches of Medical Knowledge.

(a) Paediatrics (inaugurated October 4, 1921).

Chairman: DR. E. H. M. STEPHEN; Honorary Secretaries: DR. W. VICKERS, D.S.O., and DR. M. J. PLOMLEY. Membership, thirty-eight. Meetings were held on April 8 (annual), April 28 (in conjunction with the Branch and the Section of Neurology and Psychiatry), June 23 (in conjunction with the Branch and the Section of Obstetrics and Gynaecology and the Section of Surgery), July 29, September 23, November 4.

(b) Hygiene and Preventive Medicine (inaugurated January 3, 1922).

Chairman: DR. ROBERT DICK; Honorary Secretary: DR. E. S. MORRIS. Membership, fourteen.

(c) Orthopaedics (inaugurated May 7, 1923).

Chairman: DR. W. VICKERS, D.S.O.; Vice-Chairman: DR. D. J. GLISSAN; Honorary Secretary: DR. J. HOETS. Membership, twelve. Meetings were held on May 5, July 7, October 20, October 27 (in conjunction with a meeting of the Branch and a meeting of the Section of Obstetrics and Gynaecology), December 1 (annual).

(d) Pathology and Bacteriology (inaugurated April 3, 1924).

Chairman: DR. MARJORY LITTLE; Honorary Secretary: DR. W. KEITH INGLIS. Membership, fifteen. Meetings were held on March 17, July 21, November 24 (in conjunction with the Branch and the Section of Medicine).

(e) Neurology and Psychiatry (inaugurated June 5, 1924).

Chairman: DR. H. C. McDOUALL; Vice-Chairman: DR. A. DAVIDSON; Honorary Medical Secretary: DR. R. A. NOBLE; Honorary Secretary: DR. J. A. L. WALLACE. Membership, fifty-one. Meetings were held on April 28 (in conjunction with the Branch and the Section of Paediatrics), July 28 (in conjunction with the Branch and the Section of Obstetrics and Gynaecology), September 20, October 13 (in conjunction with a clinical meeting of the Branch, at Gladesville Mental Hospital), November 17 (annual), December 1 (in conjunction with the Section of Medicine).

(f) Oto-Rhino-Laryngology (inaugurated June 11, 1924).

Chairman: DR. C. F. WARREN; Vice-Chairman: DR. R. S. GODSALL; Honorary Secretary: DR. G. R. HALLORAN. Membership, twenty-six. Meetings were held on April 26 (in conjunction with the Ophthalmological Society of New South Wales), July 12, November 30 (annual).

ATTENDANCE OF MEMBERS OF THE COUNCIL AND OF THE STANDING COMMITTEES OF THE COUNCIL.

Office-Bearers.	Council.	Executive and Finance Committee.	Ethics Committee.	Organization and Science Committee.	Medical Politics Committee.	Medical Journal Sub-Committee (Executive and Finance Committee).
DR. A. J. ASPINALL	7	—	—	5	—	—
DR. J. E. V. BARLING	4	—	—	—	6	—
DR. F. BARRINGTON	5	8	—	—	—	7
DR. GEORGE BELL, O.B.E.	5	11	—	—	—	—
DR. C. B. BLACKBURN, O.B.E.	6	—	7	—	—	—
DR. F. BROWN CRAIG (Vice-President) (Acting President, April to October, 1927)	6	10	1	7	10	7
DR. W. H. CRAIG (Honorary Treasurer and Premises Attorney)	9	13	9	9	12	10
DR. A. DAVIDSON	8	—	8	—	—	—
DR. J. A. DICK, C.M.G. (Honorary Librarian)	5	11	—	—	12	—
DR. A. W. HOLMES A COURT (Honorary Medical Secretary)	7	—	—	11	—	—
DR. E. M. HUMPHERY	6	—	—	—	14	—
DR. J. L. T. ISBISTER	5	—	7	—	—	—
DR. C. H. E. LAWES	7	5	—	—	13	—
DR. T. W. LIPSCOMB	8	12	—	—	14	6
DR. R. J. MILLARD, C.M.G. (Ex-President)	8	8	7	—	12	—
PROFESSOR A. E. MILLS	5	—	—	4	—	—
DR. A. A. PALMER	6	—	8	—	—	—
DR. S. A. SMITH (President) ¹	3	5	3	4	6	1
DR. R. H. TODD (Honorary Secretary) ..	9	13	9	11	16	10
DR. R. B. WADE	9	12	9	—	—	5
Number of Meetings Held	9	13	10	11	16	10

¹ Absent on leave January to October, 1927.

(g) Medicine (inaugurated October 1, 1924).

Chairman: PROFESSOR A. E. MILLS; **Vice-Chairman:** DR. J. MACDONALD GILL and DR. A. W. HOLMES & COURT; **Honorary Secretary:** DR. COTTER HARVEY. Membership, thirty-five. Meetings were held on March 15 (annual), June 21 (in conjunction with the Branch and the Section of Surgery and of Radiology), November 24 (in conjunction with the Branch and the Section of Pathology and Bacteriology).

(h) Medical Literature and History (inaugurated June 26, 1925).

Chairman: DR. R. SCOT SKIRVING; **Honorary Secretary:** DR. L. COWLISHAW. Membership, twenty-nine. Meetings were held on June 2, August 18, November 9.

(i) Surgery (inaugurated July 30, 1925).

Chairman: PROFESSOR F. P. SANDES; **Honorary Secretary:** DR. T. FARRANRIDGE. Membership, forty. Meetings were held on May 26 (in conjunction with the Branch and the Section of Radiology), June 23 (in conjunction with the Branch and the Section of Pædiatrics and of Obstetrics and Gynæcology), July 21, August 25 (in conjunction with the Branch and the Section of Medicine and of Radiology), August 31.

(j) Obstetrics and Gynæcology (inaugurated August 6, 1925).

Chairman: DR. R. L. DAVIES; **Vice-Chairman:** DR. J. L. T. ISBISTER; **Honorary Secretary:** DR. A. J. GIBSON. Membership, fifty-one. Meetings were held on March 16, June 15, June 23 (in conjunction with the Branch and the Section of Surgery and of Pædiatrics), July 28 (in conjunction with the Branch and the Section of Neurology and Psychiatry), September 21, October 27 (in conjunction with the Branch and the Section of Orthopædics), November 16 (annual).

(k) Radiology (inaugurated December 3, 1926).

Chairman: DR. J. G. EDWARDS; **Honorary Secretary:** DR. M. FRIZELL. Membership, sixteen. Meetings were held on February 26, May 26 (in conjunction with the Branch and the Section of Surgery), August 25 (in conjunction with the Branch and the Section of Medicine and of Surgery), December 3 (annual).

Federal Committee.

The Federal Committee of the British Medical Association in Australia met in Melbourne on April 27, 1927, and in Sydney on September 29, 1927. Reports of the proceedings of the Committee will be found in THE MEDICAL JOURNAL OF AUSTRALIA of May 14, 1927, at page 728, and October 22, 1927, at page 592, respectively.

Mr. A. W. Green.

During the year Mr. A. W. Green, who has been for forty-five years the Assistant Honorary Secretary of the Branch, was absent for six months on a visit to Europe and America. Before his departure a presentation of a gold watch was made to him by members and ex-members of the Council. The members of the Council of the New South Wales Medical Union joined in the presentation. Mr. Green returned from his travels in November and resumed his office with his old cordiality and enthusiasm unabated.

Australasian Medical Congress (British Medical Association).

The invitation of the New South Wales Branch to the Federal Committee to arrange for the third session of Congress to be held in Sydney in the spring of 1929 was accepted April 27, 1927. Sir Alexander MacCormick allowed himself to be nominated as President of Congress. His nomination was confirmed at an extraordinary general meeting of the Branch held August 25, 1927, and he was duly appointed by the Federal Committee accordingly.

A general committee of Congress was formed with power to add to its numbers. The first meeting of the committee was held on September 7, 1927, when the Executive Committee and the Finance Committee were formed. Dr. A. A.

Palmer (who, it will be remembered, was Honorary General Secretary of the Australasian Medical Congress, Ninth Session, held in Sydney in 1911) and Dr. T. W. Lipscomb accepted the important and onerous position of Joint Honorary General Secretaries of Congress and Dr. W. H. Crago that of Honorary Treasurer. Meetings of the Executive Committee have been held and the Sections of Congress determined. The further organization of the session has been proceeded with and it is understood that the work is well advanced. It is noted by the constitution and regulations of the Australasian Medical Congress (British Medical Association) that every member of any Branch of the British Medical Association in Australia or of the New Zealand Branch is entitled to be a member of Congress for the Session upon his own application in writing to the Executive Committee and without election upon payment to the Executive Committee of the prescribed membership subscription. It is understood that members of the several Branches will be communicated with in due course and invited to apply for membership of Congress.

The Medical Journal of Australia.

THE MEDICAL JOURNAL OF AUSTRALIA is to be congratulated on having successfully published the Transactions of the Australasian Medical Congress (British Medical Association), Second Session, Dunedin, New Zealand, February, 1927, as a series of supplements to the journal, whereby they became available to all the members of the Association. The same high scientific standard of the journal has been maintained as in previous years and the amount of its reading matter has been materially increased. It is understood that during the year the plant and equipment of The Printing House have been extended and that the profit producing stage of the Company's business is thereby brought appreciably nearer.

Premises.

Additional land has been acquired for the Association's new premises in Macquarie Street by the purchase of Number 135, with a frontage of thirty feet and a depth to Phillip Lane of eighty feet. This, together with Number 137, previously purchased, provides the desired frontage of sixty feet. Competitive designs for a building were invited from architects throughout the Commonwealth. The result of the competition, whereby the architect is to be chosen, is awaited with interest.

The claim of £96,000 for compensation for the Association's resumed premises, 30-34, Elizabeth Street, has not yet been paid.

For the purpose of assisting the financing of the new building, the issue of debentures to members of the Association was authorized. The issue consisted of 600 debentures of Series B of £50 each (£30,000) carrying interest at the rate of $\frac{1}{2}$ per centum per annum. The terms of issue of these debentures provided for the outstanding debentures of Series A to be converted into debentures of Series B or to be paid off. The whole of the issue has not yet been taken up, but it is understood that a number of members who propose to subscribe are awaiting the commencement of building operations.

Contract Attendance: Friendly Society Lodges.

(a) The death on March 3, 1928, of Mr. J. P. Taylor was noted with regret. Mr. Taylor had been for many years the Honorary Secretary of the Friendly Societies' Association of New South Wales and his courtesy and sincerity in dealing with the problems of medical benefit organization and administration were always unflinching. His successor in the office, Mr. J. Williams, is carrying on in the same spirit. The Friendly Societies' Association and the Council have been in communication throughout the year in connexion with (i) the complications resulting from the *Workers' Compensation Act*, 1926-1927, (ii) a proposal for the extension of the range of dependants included under Clause 26 of the Common Form of Agreement and (iii) a proposal that the application form for admission to the medical benefit used by all lodges should be the same and that it should be so worded as to enable the applicant to understand the limitations of the Common Form of Agreement in respect of income.

(b) *Workers' Compensation Act, 1926-1927*.—By arrangement with the Friendly Societies' Association of New South Wales, finalized February 2, 1928, Clause 5 of the Common Form of Agreement has been amended as from April 1, 1928, by the insertion in it, after the words "damages in a Court of Law" of the following words, namely:

and, provided that, in the event of any individual member being entitled for the time being to the medical benefit of the *Workers' Compensation Act, 1926*, or any Act or Acts amending the same, as an injured worker within the meaning of that Act, such member shall not be entitled, during such limited period as medical or surgical treatment under that Act is available to him, to medical attendance under this agreement for the particular injury in respect of which the member is an injured worker under the Act; but, upon the amount granted to cover medical attendance and medicine, if supplied, being exhausted, then the medical officer shall, when called upon, render the necessary services just as if this proviso had not been included in this agreement;

A supplemental agreement form (in duplicate), completed ready for signature by the medical officer and the trustees of the lodge, has been supplied to each medical officer of every lodge, whose lodge appointments are registered at the office of the Branch in accordance with the by-laws, so that he may arrange with the lodge for the insertion of the proviso in Clause 5 of his existing agreement. The effect of the insertion of the proviso will be that no injured worker lodge member on his list for attendance will be entitled to free treatment for his injury from him as medical officer unless or until the cost incurred by the member in obtaining the treatment exceeds the amount of the compensation (cost of treatment) payable to him by his employer. The responsibility of the medical officer to give medical treatment to the dependants of the injured worker member is not affected by the proviso, but continues unaltered. The supplemental agreement form included also an amendment of Clause 26 (c) whereby it will read as follows:

26. (c) Widowed mother of an unmarried member and brothers and sisters up to the age of 16 years; if resident with and wholly dependent upon him and, if passed, with or without examination, by the medical officer.

(c) *Federal Model Lodge Agreement*.—A model form of agreement for use with friendly society lodges was drawn up and approved by the Federal Committee for adoption by the several Branches as required. The model is based on the New South Wales Branch Common Form of Agreement which has worked satisfactorily for all concerned since it was first introduced, January 1, 1914.

New Articles and By-Laws.

In accordance with the requirements of the *Companies Act*, new articles of Association were adopted in pursuance of a special resolution which was passed and confirmed at extraordinary general meetings of the Branch held on May 26 and June 23, 1927. The articles strictly follow the model articles of Association for Branches in Australia proposing to incorporate, approved by the Council of the British Medical Association at its meeting held February 13, 1924.

The adoption of the new articles of association necessitated the redrafting of the accumulated rules and regulations of the Branch and their adoption in the form of by-laws in accordance with Article 68 of the Articles of Association. The necessary resolution for the making of the by-laws was passed at an extraordinary general meeting of the Branch held on June 9, 1927.

Workers' Compensation Act, 1926-1927.

The course of medical practice throughout the State, not only so far as general practitioners have been concerned, but also as affecting consultants and specialists, has continued to be disturbed by the operation of the *Workers' Compensation Act* and the work of the Council and of the office of the Branch has, in consequence, been

greatly increased. In furtherance of the proposal referred to in last year's report of the associated licensed insurers and the Government Insurance Office for the adoption of a suitable schedule of fees and charges, the Council and subcommittees appointed for the purpose met the representatives of the insurers on many occasions with the result that a schedule, Schedule D, acceptable to the insurers, was drawn up and approved by the Council, October 4, 1927. It was communicated to members of the Branch, October 20, 1927, with a memorandum explaining its purport and application. It was made clear that the schedule applied only where the medical attendant chose of his own free will to look to the insurer for the payment of his fees and charges instead of exercising his legal right to look to his patient or other person liable. It was noted also that the fees and charges in the schedule were lower than those prevailing throughout the community for similar treatment of injured persons and that the insurers who were parties to it, undertook to pay the medical attendant directly, provided the fees and charges for attendance were on the reduced scale set out in the schedule. It was not contemplated or anticipated that consultants or specialists would look to the insurers for payment for their services. The Council understands, however, that it is thought by many that, if practicable, the adoption of schedules of fees and charges approved by the insurers as available for use by consultants and specialists would be in the interest of injured worker patients, insurers and the practitioners concerned.

In regard to the provisions of the Act, Section 10 (7), enabling hospitals to recover from employers the cost of any hospital treatment provided for their injured workers, it is understood that many of the insurers have resisted the claims made by the hospitals.

Congratulations.

A letter of congratulation was sent to Sir Charles Clubbe on the honour of Knight Commander of the Most Excellent Order of the British Empire conferred upon him by His Majesty the King. This recognition of the conspicuous services of Sir Charles Clubbe in the community in connexion with the Royal Alexandra Hospital for Children, the Royal Prince Alfred Hospital, the Bush Nursing Association and of his many valuable contributions to medical science was received with much satisfaction by the members of the medical profession.

B.M.A. Lectures.

In pursuance of the resolution of the Council of January 5, 1926, which established a system of lectures of a distinctive character on scientific and clinical subjects to be delivered at meetings of Local Associations outside the metropolitan area, lectures were arranged as follows:

Northern District Medical Association: (i) Armidale, June 15, 1927, Dr. R. B. WADE: "Some Forms of Vomiting in Children"; (ii) Tamworth, September 21, 1927, Dr. H. S. STACY: "Some of the Advances in Modern Surgery"; (iii) Glen Innes, December 14, 1927, PROFESSOR J. C. WINDEYER: "Practical Points in the Diagnosis and Treatment of (a) Occipito-posterior Positions and (b) Disproportion Between the Foetal Head and the Pelvic Brim."

Central Southern Medical Association: (i) Goulburn, September 9, 1927, Dr. F. S. HANSMAN (for Dr. A. H. TEBBUTT): "Endocrinology; With Special Consideration of Investigation and Treatment of Thyroid Diseases, Pituitary Disorders and 'Diabetes'; (ii) Canberra, February, 1928, Dr. D. J. GLISSAN: "Some Common Foot Ailments and Their Treatment."

Central Northern Medical Association: Newcastle, March 24, 1928, PROFESSOR A. E. MILLS: "Some Common Symptoms and Their Interpretation."

Eastern District Medical Association: Port Macquarie, March 31, 1928, Dr. E. H. M. STEPHEN: "Some Gastro-intestinal Disorders in Childhood."

Post-graduate Courses.

The following post-graduate courses were held, namely:

(a) Diseases of Children, at the Royal Alexandra Hospital for Children and the Tressillian Mothercraft Training

School (Petersham), May 23 to 27, 1927. Thirty-three members attended, some of whom took the opportunity of going into residence for the period of the course at Saint Andrew's College, in accordance with arrangements kindly made for the purpose by the Principal, the Reverend E. E. Anderson, D.D.

(b) Obstetrics, at the Royal Hospital for Women (Paddington), the Women's Hospital (Crown Street) and the Tressillian Mothercraft Training School (Petersham), January 24 to February 4, 1928. Nine members attended the course, most of whom took advantage of the arrangement made for residence at the hospitals during the period of the course.

S. A. SMITH,
President.

FINANCIAL STATEMENTS.

Dr. W. H. Crago, the Honorary Treasurer, presented the statement of receipts and expenditure of the Branch. The statement was received. Dr. Crago gave a short explanation of the state of the premises account and said that unfortunately it had not been audited.

On the motion of Dr. W. H. Crago, seconded by Dr. J. ADAM DICK, the thanks of the meeting were accorded to Dr. A. M. Gledden and Dr. F. W. Hall for their services as auditors.

PRESIDENT'S ADDRESS.

Dr. S. A. SMITH delivered his address (see page 424).

Dr. J. E. V. BARLING in moving a vote of thanks to Dr. Smith said that the address had been a masterly contribution. Dr. Smith had bidden them cast off the bonds of tradition and work on the lines followed by McKenzie. If they did this, it would be impossible for them to go wrong. They should not forget the debt which they owed to Dr. Smith for his work as a member of the Council extending over many years. None had worked harder than Dr. Smith and he had always been prepared to shoulder more than his share of the burden.

The motion was seconded by PROFESSOR A. E. MILLS and was carried.

NEW PREMISES.

The President, Dr. S. A. SMITH, announced that Professor Leslie Wilkinson, the assessor appointed by the Branch for the architectural competition in connexion with the new building, had made his awards. The first place was gained by Messrs. Kenneth McConnel and J. C. Fowell, the second place by Messrs. Peddle, Thorp and

Walker and the third by Mr. Leith McCredie and Miss Dorothy Weatherstone. Dr. Smith thought that the Branch could be congratulated on the result and that the new home would be one of which they could be proud. The winning designs were displayed for the inspection of members.

ELECTION OF OFFICE-BEARERS.

The President announced the result of the election of President, President-Elect and Members of the Council as follows:

President: Dr. J. E. V. Barling.

President-Elect: Dr. F. Brown Craig.

Members of the Council: Dr. A. J. Aspinall, Dr. George Bell, O.B.E., Dr. C. B. Blackburn, O.B.E., Dr. W. H. Crago, Dr. A. Davidson, Dr. J. A. Dick, C.M.G., Dr. J. Goodwin Hill, Dr. A. W. Holmes a Court, Dr. E. M. Humphery, Dr. J. L. T. Isbister, Dr. C. H. E. Lawes, Dr. T. W. Lipscomb, Dr. R. J. Millard, C.B.E., C.M.G., Professor A. E. Mills, Dr. A. A. Palmer, Dr. R. H. Todd, Dr. R. B. Wade.

A vote of thanks was passed to the scrutineers, Dr. J. G. Edwards, Dr. L. G. Tait, Dr. A. M. Gledden, Dr. H. S. Marsh, Dr. A. J. Gibson, Dr. H. A. Ridler.

On the motion of Dr. W. H. Crago, seconded by Dr. E. M. HUMPHERY, Dr. A. M. Gledden and Dr. F. W. Hall were reappointed honorary auditors. Dr. Crago took the opportunity of thanking members for his reelection to the Council for the fortieth year in succession. He said that he felt that he had a privilege which few could claim.

On the motion of Dr. R. J. MILLARD, C.B.E., C.M.G., seconded by PROFESSOR A. E. MILLS, Dr. C. B. Blackburn, O.B.E., was appointed Representative of the New South Wales Branch in the Representative Body for the year 1928-1929.

Dr. G. R. Halloran and Dr. G. M. Barron were appointed delegates to attend the annual meeting of the British Medical Association at Cardiff.

INTRODUCTION OF PRESIDENT.

Dr. S. A. SMITH then introduced Dr. J. E. V. Barling, the newly appointed President.

Dr. J. E. V. BARLING thanked the members of the Branch for having elected him President. The honour was one which anyone would prize. He realized the difficulty of filling the position when he thought of those who had filled it in the past. He asked for cooperation and support in his endeavour to serve the branch.

BRITISH MEDICAL ASSOCIATION—NEW SOUTH WALES BRANCH.

Receipts and Expenditure for the Year Ended December 31, 1927.

RECEIPTS.			EXPENDITURE.		
	£	s. d.		£	s. d.
Balance, forward	3,384	2 10	British Medical Association	2,028	2 3
Subscriptions	7,531	8 9	THE MEDICAL JOURNAL OF AUSTRALIA	1,584	0 0
Interest	220	16 8	Clerical Assistance	1,552	10 0
Sales	23	1 5	Rent (13 months)	866	13 4
Hire of Hall	53	15 0	Library	209	0 8
Exchange and Discounts	19	9 4	Bank Charges	12	11 8
Post-graduate Course	6	2 0	Printing and Stationery	142	8 11
Debit Balance, Cash Book	32	6 11	Stamps and Telegrams	186	12 9
			Federal Committee	160	6 0
			Cleaning	78	0 0
			Electric Light and Power	39	14 11
			Telephone	29	10 2
			Travelling Expenses	29	19 0
			Family Endowment Act Contribution	14	13 8
			Sundry Expenses	80	3 7
			Loan to Premises Account	4,250	0 0
			Balance, Petty Cash Accounts	6	16 0
	£11,271	2 11		£11,271	2 11

Examined and found correct.

A. MAITLAND GLEDDEN }
FRED. W. HALL } Auditors.

W. H. Crago,

Honorary Treasurer.

Obituary.

DAWSON WILLIAMS.

As we go to press there reaches us by the English mail news of the death of Sir Dawson Williams, until recently editor of *The British Medical Journal*. In a subsequent issue a full account will be given of the career and achievements of this man of letters. His influence on medical journalism has been profound and the world of science is the poorer by his death. Dawson Williams died at his country home on February 27, 1928.

Post-Graduate Work.

COURSE IN PHYSIOLOGY IN MELBOURNE.

THE MELBOURNE COMMITTEE FOR POST-GRADUATE WORK has arranged a special series of lecture-demonstrations in advanced physiology by Professor W. A. Osborne, Professor of Physiology, University of Melbourne. The lectures will be ten in number and will be held at the University every Tuesday evening at 8.30 beginning on April 17, 1928.

The fee for the whole course is £4 4s. and application should be made to the Honorary Secretaries without delay.

The following syllabus has been arranged:

Lecture I.

The Heart.

Importance of auricular contraction. Loss of ventricular efficiency in flutter and fibrillation.

Starling's "Law of the Heart."

The problem whether the vagus has other than chronotropic action. Demonstration of partial heart-block due to vagal stimulation. Cardiac irregularities of reflex origin; the reflexigenous areas concerned.

Electrocardiograms from exposed heart and from restricted portions of heart.

The function of the pericardium. Dilatation.

The heart valves; demonstration of difference between aortic and pulmonary semilunars.

The pharmacology of the heart (selected actions).

Lecture II.

The Systemic Arteries.

Arteriolar muscle as important as cardiac. Arterioles more muscular than elastic. Automatic adjustments of the circulation to suit tissue requirements.

The pulse wave. Velocity of the pulse wave; its possible clinical importance. Demonstration of hot wire method. Increased velocity of crest of pulse wave and hence "breaking" in special conditions.

The automatic regulation of arterial pressure—reflexes from the aortic arch and the circle of Willis. Disturbances of this regulation.

Special features of circulation in brain, bone and eye. The necessity of pulsatile circulation in the kidney; action of decapulation.

Collateral circulation.

Selected pharmacology of the arteries.

Lecture III.

The Capillaries.

Importance only recently realized. Necessity of delicate adjustments of capillary circulation *exempli gratia* oxygen inadequacy and excess both harmful.

Histamine and the capillaries. The threefold action of local injury. Demonstration of histamine shock treated with viscous saline solution and also with pituitary extract.

Capillary pressure and its measurement. The skin microscope. Permeability of capillaries.

Electrical resistance of the skin influenced by the circulation.

The psycho-galvanic reflex.

Lecture IV.

The Veins.

Special qualities of vein wall.

Caval pressure regulated by Bainbridge reflex and probably by other adjustments. Demonstration of caval pressure unaffected by gross changes in systemic arterial pressure, but increasing at once when heart fails.

Some agent operating on vein muscle. Experiment showing absence of rise of pressure in *vena cava* in dead animal when the vein is flooded with saline solution, but rise marked in living animal during vagal slowing of heart.

Venous return to the heart the weak spot of the circulation. Smallness of the positive pressure in the pericardium that will stop circulation completely.

Venous obstruction and back pressure.

Lecture V.

The Blood.

Delicate standardization of blood constituents—coarse adjustments, fine adjustments and micro-adjustments. Corpuscle and haemoglobin changes have given false idea of blood variability. Uselessness of much blood chemistry.

Unsatisfactory state of our knowledge concerning blood clotting.

Methods for determining total volume.

Micro-gravimetric methods (available also for other body fluids).

Micro-analysis of blood gases.

Criticism of measurements of viscosity. The value of refractometry.

Blood "buffers" and reaction.

Lecture VI.

The Colloidal State.

Recent advances in theory. Surface energies and molecular orientation. Some practical applications of colloid theory. Capillary and glomerular filtration, oedema, absorption of colloids from lymph spaces and of inflammatory exudates from serous cavities.

Colloid compounds with metallic salts. Necessity of blood salts being kept standardized.

Absorption phenomena.

Drugs, especially metals, in colloid form.

Lecture VII.

The Peripheral Nervous System.

The two discriminative features of afferent messages—pattern and rhythm. The features of motor messages to skeletal muscle—pattern and pattern sequence.

Distortion of pattern both motor and afferent when nerves regenerate after cutting. Absence of such distortion after injury through crush alone.

Muscle transplantation must be superior to nerve transplantation.

Problem of inhibition. Humoral theory of inhibition. Why inhibition of skeletal muscle should be central and not peripheral as in smooth and cardiac muscle.

Sympathetic innervation of skeletal muscle.

The pluri-segmental innervation of skeletal muscles. The sorting of nerves at the plexus.

Lecture VIII.

The Alimentary Canal.

Enamel as the only crystalline tissue in the body. Its complete insolubility in saliva, but solubility in water. The absence of metabolism and repair.

The osmotic equilibrating functions of the stomach. Why stratified epithelium extends down the oesophagus.

Regulation of pancreatic activity.

Some recent work on the liver and on bile pigments and allied pigments.

The problem of fat absorption.

Vitamin D and its precursors; its action on calcium metabolism.

Lecture IX.**Respiration.**

Function of the bronchiolar muscles.

Influence of respiration on the circulation. Demonstration of forced breathing impeding the circulation.

Alveolar air estimation. Its limited practical value.

Vital capacity as index of effective chest size; its relation to body height and weight.

The varying extensibility of parts of the lung—apical rigidity and its pathological consequences.

The nerve levels involved in coordination of respiratory acts.

The unsolved problem of ventilation.

The lungs as absorbing surfaces for poisons appearing with modern habits of life. The increasing danger of breathing carbon monoxide, hydrocarbons and volatile or "atomized" lead compounds.

Lecture X.**Basal Metabolism.**

The different methods of approach. Measurements of carbon dioxide produced contrasted with measurements of oxygen consumed. Some appliances and technique of some estimations.

Action on metabolism of high temperatures.

The complexity of tissue oxidations and reductions making very difficult the discovery of metabolism regulation. The occurrence of anaerobic liberation of energy as in muscle where the oxidation is post-contraction. In this case there is temporary allowance of considerable oxygen debt.

Endocrine glands and metabolism. Chemistry and effects of thyroxin and its derivatives. The iodine problem.

Books Received.

ANIMAL AND HUMAN CONDUCT, by William E. Ritter, with the collaboration of Edna Watson Bailey; 1928. London: George Allen and Unwin, Limited. Demy 8vo., pp. 339. Price: 15s. net.

BAILLIÈRE'S SYNTHETIC ANATOMY, by J. E. Cheesman; Part IX: The Head and Neck. 1928. London: Baillière, Tindall and Cox. Crown 4to., pp. 12. Price: 2s. 6d. net.

Diary for the Month.

- APRIL 10.—Tasmanian Branch, B.M.A.: Branch.
 APRIL 10.—New South Wales Branch, B.M.A.: Ethics Committee.
 APRIL 12.—Victorian Branch, B.M.A.: Council.
 APRIL 12.—New South Wales Branch, B.M.A.: Clinical Meeting.
 APRIL 13.—Victorian Branch, B.M.A.: Branch.
 APRIL 13.—Queensland Branch, B.M.A.: Council.
 APRIL 16.—New South Wales Branch, B.M.A.: Organization and Science Committee.
 APRIL 17.—Tasmanian Branch, B.M.A.: Council.
 APRIL 17.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
 APRIL 18.—Western Australian Branch, B.M.A.: Branch.
 APRIL 18.—Central Northern Medical Association, New South Wales.
 APRIL 24.—New South Wales Branch, B.M.A.: Medical Politics Committee.
 APRIL 25.—Victorian Branch, B.M.A.: Council.
 APRIL 26.—New South Wales Branch, B.M.A.: Branch.
 APRIL 26.—South Australian Branch, B.M.A.: Branch.
 APRIL 27.—Queensland Branch, B.M.A.: Council.
 MAY 1.—Tasmanian Branch, B.M.A.: Council.
 MAY 2.—Victorian Branch, B.M.A.: Branch.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvi.

BROKEN HILL AND DISTRICT HOSPITAL: Surgeon Superintendent.

CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Medical Superintendent.

THE UNIVERSITY OF MELBOURNE: Demonstrator in Histology.
 THE WOMEN'S HOSPITAL, CROWN STREET, SYDNEY: Honorary Radiographer.

VICTORIAN EYE AND EAR HOSPITAL: Resident Surgeons (3).

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Boooleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to positions at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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